HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

VOLUME 15, NO. 4, ABSTRACTS 460-608. APRIL 1975

LONDON: HER MAJESTY'S STATIONERY OFFICE

85p net

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First published 1975

ISBN 0 11 722484 7

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HOSPITAL ABSTRACTS

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HOSPITALS IN OTHER COUNTRIES

460. SCHINDL, K. Studie zur Neuordnung des Krankenanstaltenwesens in Österreich. **[Study on the reorganization of the hospital service in Austria.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1974, Nov., vol. 15, no. 11, pp. 591-592, 597-604, 607-614, 617-623; Dec., vol. 15, no. 12, pp. 643-644, 647-650, 655-658, 661-676.

The author begins by surveying the Austrian hospital statistics for 1973: these show a provision of 11 beds per 1,000 population, a bed occupancy of 83.71 per cent, an average length of stay of 20.94 days (15.11 days for acute hospitals) and an admission frequency of 163.85 per 1,000. He then describes the various measures which have been taken from 1961 up to the 1974 amendment to the Hospitals Act to improve the hospital service. Projections are given for hospital requirements up to 1980s. Details are given of the state and provincial subsidies to make up deficiencies in capital and revenue costs. Plans for the future should aim to co-ordinate all types of health care and to integrate hospital services on a national basis. There is likely to be a real shortage of beds for the chronic sick, the elderly, for rehabilitation and for psychiatric treatment.

PLANNING, DESIGN AND CONSTRUCTION

See also Abstract No. 500

461. GREEN, J. R. B. **Information practices and problems of hospital planners.** *Hospital & Health Care Administration*, Prahran, Victoria, 1974, Nov., vol. 4, no. 11, pp. 27-31, 33.

This paper reports a survey by postal questionnaire of the information practices and problems of hospital planners in Australia. Of 62 questionnaires sent to individuals, firms and organizations, 27 were returned. Information was sought on location, size of organization, aids used, library holdings, retrieval performance, other information sources, improvements considered necessary, and use of particular publications. The survey indicated that the most developed and best equipped libraries for hospital planning were in state or federal organizations, but there was considerable dissatisfaction with access to information sources by private consultants and by individual hospitals. The more informed and constructive comments referred to the need for: (i) greater co-ordination between information agencies; (ii) multi-level information networks; and (iii) widening the scope of existing information retrieval systems and services.

462. LEE, M. L. **Theoretical foundation of hospital planning.** *Inquiry*, Chicago, 1974, Dec., vol. 11, no. 4, pp. 276-281.

This study indicates that the hospital service possesses a peculiar organizational structure which results in extensive duplication, over-equipment and over-capacity and

prevents economies in the use of specialized inputs being realized. Hospital planning can contribute to improving the efficiency of production through the proportion by which specialized inputs are combined with hospital beds. This paper describes a delivery system which will fully achieve organizational efficiency to the extent permitted by medical constraints. Its concept of specialization represents a major departure from the comprehensive approach to hospital care delivery; emotional as well as social and political constraints are likely to hinder its implementation. In addition, there are certain medical problems associated with emergencies, multiple illnesses, etc., that will make it impossible to implement a fully specialized system. The potential economies from specialization are likely to be large, and even the implementation of a partially specialized system could improve considerably the efficiency of resource allocation.

463. RANK, B. **Purpose and function of a new hospital.** *Hospital & Health Care Administration*, Prahran, Victoria, 1974, Nov., vol. 4, no. 11, pp. 5-8.

This paper, given at a seminar to discuss the development of Essendon Hospital, draws attention to and discusses decisions which must be made and clarified before there can be any logical approach to planning. They relate to: (i) the purpose of the hospital; (ii) its size; (iii) the flexibility of the arrangements; (iv) cost value; (v) teaching responsibilities and (vi) space and needs.

464. VORA, J. A. **Heuristics and optimizing techniques applied to long range facility planning for hospital ancillary departments.** *Management Science*, Providence, 1974, Dec., vol. 21, no. 4, pp. 409-417.

This paper proposes a conceptual framework for long-range planning of ancillary departments in hospitals and applies it to a radiology department. The framework involves the interactions of optimizing techniques with managerial heuristics to develop alternative feasible plans and identify a near-optimal long-range facility plan (the best relative to these alternatives). The paper proceeds through the network of the framework explaining the contents of each element.

BUILDING: TENDERING, ETC.

465. MACDONALD, A. J. **Management of major hospital projects.** *Hospital & Health Care Administration*, Prahran, Victoria, 1974, Nov., vol. 4, no. 11, pp. 9, 11-13, 15-16.

The use of adequate techniques of project management is essential to the successful completion of projects. This paper attempts to summarize the known techniques available for better administration and management of hospital construction projects. It covers: project management; feasibility study stage; design solution; construction stage; construction management; and commissioning.

466. SEARS, D. and AULD, R. **Hospital buildings: a suitable case for treatment?** *World Hospitals*, London, 1974, vol. 10, no. 4, pp. 207-210.

This paper discusses some of the problems associated with the regional allocation of capital for hospital building. Three main characteristics of hospital buildings affect

their functional suitability: size, location and physical condition. This paper concentrates on the objective assessment of physical condition. The age of a building cannot be determined solely by the age of the original structure since this may have been extended or adapted. It should be possible to estimate the physical suitability of a building by certain measurable characteristics. The subjective opinions of different classes of hospital users (including doctors, patients and nurses) could be used to identify their response to hospital buildings and their opinions on suitability. Only in the context of a coherent regional plan can a decision be reached on whether existing hospitals should be retained, modernized, extended or replaced: this will require techniques for evaluating the physical condition of the existing buildings.

BUILDING COSTS

467. GERMANY. BUNDESMINISTERIUM FÜR BILDUNG UND WISSENSCHAFT. Kostenrichtwerte, Kostenplanungsverfahren für Hochschulkliniken. **[Cost limits, cost planning methods for university hospitals.]** (Schriftenreihe Hochschule 12) München, Gersbach & Sohn, 1974, DM25.00.

With the aim of establishing cost standards and cost planning procedures for teaching hospitals, the Stuttgart University Institute for Building Economics was commissioned by the Federal Ministry of Education and Science to carry out an investigation. This entailed the collation by computer of detailed cost figures for all the 43 projects for teaching hospitals, or teaching hospital departments, carried out in Western Germany during the years 1960 to 1973. The techniques used are described, and the various equations developed set out, in this report. From the equations the following figures for long-term building programme costs in DM per sq.m. have been worked out (1962 prices are followed in parentheses by those for May 1973): all projects—construction DM 2,349 (4,427), equipment DM 390 (736); major projects only—construction DM 2,800 (5,277), equipment DM 364 (687). Site preparation and development is put at four per cent of total cost.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

468. **Conservative, coordinated, unusual: an efficient rural hospital.** *Hospitals*, Chicago, 1974, Dec. 16, vol. 48, no. 24, pp. 28, 32, 37-38.

The 100-bed Hugh Chatham Memorial Hospital, Elkin, N.C., opened in July 1973, is Y-shaped and has three floors. The lower floor houses administration, emergency department, central services and stores. The middle floor has the operating suite and 50 single patients' rooms, each with a bath, on a double corridor plan in the leg of the Y and on a single corridor plan in the two wings. The upper floor houses labour, delivery and nursery rooms and 50 single patients' rooms on the same plan as the middle floor. The hospital was planned to have no more than 800 sq. feet per bed and to cost approximately $35 per sq. foot. Provision has been made for the addition of an extra floor at a later date. The paper is illustrated with a photograph of the exterior and plans of each floor.

469. **Reno puts money on Washoe Medical Center and it's a winner.** *Modern Healthcare*, Chicago, 1974, Dec., vol. 2, no. 6, pp. 33-35.

The new Washoe Medical Center, Reno, Nev., has a five-storey ward tower on a large base of two or three floors. The basement has 14 operating theatres in two clusters of seven with sterile work areas in the centre. The ground floor has out-patient, emergency, diagnostic, treatment and supporting departments. The main entrance is at first floor level, together with a 300-seat auditorium, 300-seat staff dining-room, administrative offices, nursing education unit, chapel and coffee shop. Four nursing units with a total of 135 beds occupy the second and third floors. The fourth floor has 45 medical and 15 coronary care beds and the fifth a 66-bed paediatric unit. The sixth floor at present a shell will become a 64-bed private unit. Nursing units are arranged on a double-corridor plan; every patient room has its own toilet facilities. Interiors were designed to bring colour and warmth to the hospital setting. The old building has been remodelled and renovated to provide new nursing units and technical departments. There are seven coloured photographs, but no plans.

470. Krankenhaus Sanitas Kilchberg-Zürich. **[Sanitas Hospital, Kilchberg-Zürich.]** *Veska*, Aarau, 1975, Jan., vol. 39, no. 1, pp. 3-19.

The new 203-bed Sanitas Hospital at Kilchberg, Zürich (architects: Ferdinand Pfanmatter and Walter Rieger, Zürich) came into use in January 1975. The main treatment and ward block has three subground and four upper floors. Stores, X-ray department and operating suite (three theatres) are on the subground floors with wards occupying the second to fourth upper floors. Wards are on a double corridor plan with three-bed rooms for general patients and single or double rooms (with bath and toilet) for private patients. Each ward floor has two day-rooms and a south-facing balcony 3.75 m. by 30 m. Adjoining the main block are a services and administrative wing, a multipurpose building seating 200 used for meetings and religious services, and a staff residence: there are two further staff residence blocks. The paper is illustrated with a site plan, plans of each floor, and four photographs.

471. COOPER-POOLE, J. H. **A new teaching and referral hospital for Tanzania.** *World Hospitals*, London, 1974, vol. 10, no. 4, pp. 199-201.

The hospital at Mwanza, north-west Tanzania, opened in 1971, consists of seven closely linked blocks. The main ward block has nine storeys: each ward floor has two 34-bed units (two single, one double and five six-bed rooms) separated by a central area with offices and traffic core. The two-storey school block houses the training schools for nurses (four-year course) and medical assistants (three-year course). There are three three-storey blocks housing service departments, and administration, medical records, physiotherapy and casualty departments. The five-storey tuberculosis block has 64 beds and a small infectious diseases ward. The seventh block houses kitchen, laundry, dining-room, boiler house and main stores. The hospital was designed for 630 beds but so far only 450 are in use.

DESIGN OF SPECIAL DEPARTMENTS

472. MIKHO, E. and DELRUE, J. **Departmental planning: operating theatres.** *World Hospitals*, London, 1974, vol. 10, no. 4, pp. 190-198.

The basic aim in designing operating theatres is to provide an efficient, safe and

comfortable environment for surgical procedures. Changes which have taken place in recent years have been concerned with the reduction of the infection hazard and the improvement of the comfort of the operating team. This paper sets out the basic principles and illustrates them with diagrams and plans.

473. HENNING, J. **New OR depends on an old principle: the staff is first.** *Modern Healthcare*, Chicago, 1974, Nov., vol. 2, no. 5, pp. 52-57.

The new operating suite in the Webber Memorial Building, Harper Hospital, Detroit, is situated in the centre of the ground floor with supporting facilities such as the recovery room and intensive care unit close by. Surrounding the theatres are a holding room, changing areas, lounges, corridors and a central nurses' station. Patients receive pre-operative checks in the holding rooms before being taken to theatre. The theatres themselves incorporate the sterile corridor concept. Providing an adequate equipment and supply system for the new theatres involved three major planning decisions: central cleaning, preparation and sterilization of instruments; an automated trolley system of supply; and heavy spending on new instruments. Optimum use of the new theatres depends largely on the attitudes of the staff. Patient co-ordinators, whose responsibilities include making sure that the patient receives all the care needed, will have a definite impact. A plan and five photographs of the suite are included.

474. Dr. Daniël de Hoed Kliniek te Rotterdam neemt nieuwe vleugel in gebruik. **[New wing of Dr. Daniël de Hoed Kliniek at Rotterdam is opened.]** *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1975, Jan. 8, vol. 44, no. 1066, pp. 10-12.

In 1974 a new wing was opened at the Daniel den Hoed Clinic for the treatment of cancer. This wing adds 2,587 sq.m. to bring the total area up to 27,833 sq.m. The wing accommodates a 'Sagittaire' 32 MeV linear electron accelerator; a moveable floor allows the apparatus to turn 360° and an 'Artronix' computer calculates the dose distribution of the radiation beam. The department of nuclear medicine now has a MED II computer system for recording and calculating radioisotopes used in patients. The paper also gives an outline of the development of radiotherapy in Rotterdam over the past 50 years.

DESIGN OF SPECIAL HOSPITALS OR UNITS

See also Abstract No. 588 (Children)

475. **St. Mary's on the Lake gets new $5.3-million wing.** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 46-47.

The new four-story wing at St. Mary's on the Lake Hospital, Kingston, Ont., opened in June 1974, has added greatly to the facilities of this long-stay hospital (average age of patients between 70 and 75). In addition to 96 beds in 50 patients' rooms (the total number of beds remains at 210 since patients have been moved from previously overcrowded areas) the wing provides a $25,000 hydrotherapy pool, a whirlpool bath, electrotherapy facilities, and a gymnasium. The accent is on rehabilitation and more than half the patients admitted annually are discharged on their way to full or partial

recovery: some are in the hospital for no more than several weeks. St. Mary's will also undertake day care and out-patient treatment.

ENGINEERING SERVICES

ARTIFICIAL LIGHTING

476. WALLINGTON, J. W. **Review of progress in hospital lighting.** *Engineering in Medicine*, London, 1974, Oct., vol. 3, no. 4, pp. 3-8.

Progress in the field of application of lighting principles has been quite marked in the last 10 years or so. This paper reviews progress in hospital lighting, which has many special features. It covers: early developments; sources of light (natural light, incandescent lamps, fluorescent lamps, discharge lamps, electroluminescence, fibre optics); colour rendering; requirements for ward areas, day spaces and waiting rooms, laboratories and service rooms, operating theatres and examination rooms; engineering aspects of hospital lighting; permanent supplementary artificial lighting; and emergency lighting.

HEATING

See Abstract No. 553

MAINTENANCE OF BUILDINGS AND EQUIPMENT

477. GANTI, A. R. and NOTTESTAD, K. M. **Assigning priorities to maintenance requests.** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 69-70, 102.

This paper describes a points system for determining priorities for maintenance service in hospitals based on: (i) the nature of the problem; (ii) the desired response (immediate or routine); (iii) the nature of the area where the problem arises; and (iv) the extent of damage or inconvenience caused by the problem. The system is in use at Creighton Memorial St. Joseph Hospital, Omaha, Nebr. It has been found so simple that a clerk can learn to operate it in less than an hour. Service is requested by filling in a three-part service request form. Two copies are sent to the maintenance department and one copy is retained by the requester. A designated maintenance department employee computes the 'priority number' by totalling the points allocated within the four categories given above, e.g. electrical problem—five points, immediate attention needed—four points, etc. The priority number is entered on the copies, the second copy is filed in a 'work pending' file and the first copy is put in a bin marked for the appropriate trade needed to do the maintenance. Maintenance men sort the requests in their bins according to priority number. When the work is done the maintenance man collects the third copy of the request and obtains the signature of the requester to show that the work has been done. All copies of the request go to the maintenance office and after checking the original request, with the acknowledgement that the work is done, is kept permanently, the other two copies being discarded. Several examples are given of how the system works.

SANITARY EQUIPMENT AND FITTINGS

See also Abstract No. 575

478. GREENLEAF, J., STALEY, R. and PAYNE, P. A. **Portable shower for bed patients.** *American Journal of Nursing*, New York, 1974, Nov., vol. 74, no. 11, pp. 2021.

To solve the problems of bathing and shampooing the hair of bedfast patients the authors built a portable shower which allows both to be carried out in less than five minutes. The shower is a stainless steel box on wheels with shower heads attached near the top. The drain is a flexible hose that can be inserted into a floor drain or the toilet. The shampoo sprayer operates with the shower on or off. Water temperature is kept constant within the range 65°F to 115°F with a fail-safe device attached. A shower bed on rollers placed on a standard gurney is used to move the patient in and out of the shower. In limited trials the shower has achieved very good results.

EQUIPMENT, FITTINGS, FURNITURE

BEDS, COTS, ETC.

479. ROEMER, R. B., MEISEL, H. and PARRISH, W. J. **Automated bed to aid pulmonary drainage and prevent decubitus ulcers.** *Medical & Biological Engineering*, Stevenage, 1975, Jan., vol. 13, no. 1, pp. 78-82.

An automated bed designed to aid pulmonary drainage and prevent bedsores is described and illustrated: it was specifically designed for a five-year-old girl with progressive deterioration of the anterior horn cells of the spinal cord. The bed automatically and periodically rotates a patient from side to side and tilts the patient's head to toe axis about the horizontal plane. The bed includes adjustable and separate frequencies of activation, ranges of movement, and alarm circuits for both motions. The complete system is relatively inexpensive and is constructed from easily obtainable components. The bed has been used by the patient for whom it was designed for a year and has been satisfactory.

STAFF GENERALLY

STAFF COMPLEMENTS

See also Abstract No. 491

480. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSINSTITUT. Långsiktig personalplanering: metoder för dimensionering. **[Long-term personnel planning: methods for forecasting requirements.]** (Spri rapport 14/74) Stockholm, Spri, 1974, 64pp.

This report presents methods which facilitate the analysis of ward staffing needs in general medicine, general surgery and long-stay departments. Factors found to be

statistically significant to variations in staffing levels were: size of ward, type of hospital, need for supervision of patients, degree of active care, actual number of patients, principles of staff budgeting, the presence of an admission ward, and the presence of an intensive care unit. Four models have been constructed for forecasting staffing needs in long-stay care, five for general surgery and seven for general medicine. The choice of model can be made on the basis of the data available. The report contains examples of how the models can be used in various situations, for example in medical care planning, budgeting, etc. [This abstract has been prepared from an English summary of the report.]

RECRUITMENT

See Abstract No. 492

SALARIES AND SUPERANNUATION

See Abstract No. 485

STAFF MANAGEMENT

See also Abstract Nos. 514, 571

481. SZILAGYI, A. D. and SIMS, H. P. **An exploration of the path-goal theory of leadership in a health care environment.** *Academy of Management Journal*, Atlanta, 1974, Dec., vol. 17, no. 4, pp. 622-634.

A basic proposition of the path-goal theory of leadership is that one of the major functions of the leader is to enhance the psychological states of subordinates, which results in increased motivation to perform and increased job satisfaction. This paper describes a study of the theory among paramedical and support staff in a major university medical center. The results supported the path-goal theory and its interpretation of the relationship between leader behaviour and subordinate satisfaction. It did not however support the path-goal theory's interpretation of the relationship between leader initiating structure and subordinate performance.

482. LYON, H. L. and IVANCEVICH, J. M. **An exploratory investigation of organizational climate and job satisfaction in a hospital.** *Academy of Management Journal*, Atlanta, 1974, Dec., vol. 17, no. 4, pp. 635-648.

This paper describes an investigation into the organizational climate of a 450-bed teaching hospital and its impact on job satisfaction for nurses and administrators. The study is based on responses to a 64-part pretested questionnaire from 99 administrative and supervisory staff and 35 registered nurses. It was found in general that organizational climate for both occupational groups studied has the most significant impact on self-actualization (personal growth, sense of accomplishment, opportunity of advancement and challenging work), a lesser impact on autonomy (setting goals and using training and experience), and only a slight impact on esteem (importance within and outside the hospital).

STAFF TRAINING

See Abstract Nos. 484, 493, 494, 498, 525, 567, 581

STAFF WELFARE

See also Abstract Nos. 535, 543

483. HARTE, J. D. **Occupational health for area health authority staff.** *Royal Society of Health Journal*, London, 1974, Dec., vol. 94, no. 6, pp. 292-295.

This paper outlines the development of occupational health services in hospitals and describes the experiment at Bedford which has had a pilot scheme since 1968 [see *Hospital Abstracts*, Vol. 10, Abstract 204]. On the basis of this experience, proposals are made for a staff occupational health service in area health authorities. It should be based on the following principles: (i) the service must be independent and answer directly to management in order to guarantee confidentiality; (ii) the service should be nurse orientated and administered by the occupational health nurse; and (iii) the service must be based on the standards already established in industry. The following points should therefore be observed: (i) the service should be administered by a nurse with the occupational health certificate; (ii) the basic unit should be centred on the district hospital; (iii) the occupational health doctor and nurse should be appointed by the area health authority and answer to the authority; and (iv) there should be an experienced occupational health doctor and nurse from industry outside the National Health Service to act as advisers to the area health authority.

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

See also Abstract No. 496

484. GOURLAY, J. R. **Education for managers.** *Health and Social Service Journal*, London, 1975, Feb. 15, vol. 85, no. 4426, pp. 365-366.

There are seven educational centres in England focusing their attention on management development in the National Health Service (NHS). Most of them are part of a much larger university or polytechnic complex, like the Nuffield Centre for Health Services Studies, University of Leeds, where the author was a lecturer. Reorganization of the NHS involved the centres in a much closer working relationship with health authorities. This paper suggests the role they may now play in research, consultancy and teaching. The centres will be making the most effective contribution to the NHS if their research is used to modify and improve their teaching and consultancy. One of the advantages some of the centres enjoy is a multidisciplinary approach to the problems of health care.

MEDICAL STAFF

See also Abstract No. 562

485. BOURNE, S. and BRUGGEN, P. **Examination of the distinction awards system.** *British Medical Journal*, London, 1975, Jan. 18, vol. i, pp. 162-165.

The Tavistock Clinic, London, is a leading postgraduate teaching centre in psychiatry but not a designated teaching hospital. When the consultants abandoned the convention of secrecy regarding distinction awards, it was discovered that they had only one-tenth the national average of awards. A subsequent investigation suggested that this was not an isolated case. There was a bias towards consultants in London teaching hospitals, and specialties such as cardiology, neurosurgery and thoracic surgery fared better than average, while mental health, geriatrics and anaesthetics fared worse. This paper explores the difficulties in understanding, investigating and influencing the system. The composition of the committees involved, the *de facto* quota system, the method of collecting information and the convention of secrecy are examined and criticized.

NURSING STAFF

See also Abstract Nos. 480, 521, 590, 599

486. HOOKER, E. Z. and O'ROURKE, T. W. **Extending roles in nursing.** *Public Health Reviews*, Tel Aviv, 1974, April/June, vol. 3, no. 2, pp. 199-213.

Over the centuries, the role of the nurse has expanded from care of the sick in hospitals, to restoration of health, to health maintenance and prevention of disease in the community. The expanded roles have arisen in part from external pressures produced by the rapid expansion of biomedical knowledge with its resulting proliferation of allied health personnel and in part from internal pressures within the nursing profession to broaden the nurse's knowledge and skill. This paper reviews the American literature on the following expanded roles for nurses: midwives, physicians' assistants, nurse practitioners and clinical nurse specialists. A list of 69 references to the literature is included.

487. STEWART, W. **Nursing and counselling—a conflict of roles?** *Nursing Mirror*, London, 1975, Feb. 6, vol. 140, no. 6, pp. 71-73.

There can be little doubt that nurses are frequently expected to act as counsellors. This paper draws attention to areas of possible conflict which nurses may experience when counselling. Conflict may be created because of the divergent attitudes of nursing and counselling towards acceptance or denial of feelings. The nurse is forced into a denial of feelings by the emotional demands of nursing which can only be tolerated by the erection of defences which may make subsequent exploration of feelings difficult. Nurses engaged in counselling need positive assistance to break through the feeling barrier; this help may be in a one-to-one relationship or in group experience.

488. KERRANE, T. A. **The clinical nurse specialist.** *Nursing Mirror*, London, 1975, Jan. 30, vol. 140, no. 5, pp. 63-65.

In this paper a British chief nursing officer presents his observations on the role and work of clinical nurse specialists in the United States gained during a recent study tour. His comments cover: doctors' reactions; nurse relationships; staff or line posts in the nursing hierarchy; patient education and performance. Although he saw that improved patient care had been effected, he returned with mixed feelings about the viability of the role for the British nursing service at this point. He is, however, convinced of its potential and considers that it merits full exploration and appraisal in Britain.

489. FLORIN, M. P. **The nursing profession and the European Economic Community.** *International Nursing Review*, Basel, 1974, Nov./Dec., vol. 21, no. 6, pp. 184-186, 183.

One aspect of the European Economic Community (EEC) is freedom of movement of workers but little has yet been done for health services staff. The complexity of decision-making is explained as a background to the position of nurses who face legal and practical problems before the ideals of the Treaty of Rome can be implemented. The Western European Nursing Group, first made contact with the EEC on the nurses' behalf. However in 1971 the EEC set up a Permanent Liaison Committee for Nurses, comprising one representative from the national nursing association of each member country. It collects information about nurses and puts forward their views and it also maintains contact with the existing international nursing bodies. EEC directives have been issued concerning the removal of restrictions to permit EEC nationals to practise in any EEC country, the membership of the relevant national nursing association of any practising EEC national, the rationalization of nurses' training and the standardization of the title 'general nurse'. Problems still remaining include social and economic conditions and professional practice. Further complications were added by Britain, Ireland and Denmark joining after the directives had been issued.

490. GUBERT, S. **Nurses in Italy.** *Nursing Mirror*, London, 1975, Jan. 23, vol. 140, no. 4, pp. 63-66.

The author visited Italy in December 1973 to compare nursing conditions with those in Britain. There is no national health service so medical and nursing conditions vary throughout the country. The nursing service is understaffed and staff frequently have to carry out duties and responsibilities above their qualifications. In addition ancillary technical staff are lacking so that nurses have to carry out their duties. There are few therapeutic and district nursing services. Hospitals have large wards each responsible for its own sterilization. Ward routine is dominated by doctor's rounds, at least twice daily. Special care units are well-equipped but with low nurse/patient ratios. Nursing staff are of three grades (two-years' training, one year's training and domestic/portering staff) but duties overlap. Specializations are few and generally not recognized by other hospitals: paediatric nurses have separate training, ward sisters require a further year's training and midwives two. Doctors dominate training to the detriment of nursing knowledge and standards vary considerably. Nursing still has a low status and career prospects are limited, so low calibre staff are common. Promotion is based on length of service rather than qualifications and capability. No part-time work is

allowed and overtime is compulsory and not necessarily paid. Students are not paid but qualified staff may have higher salaries than in Britain.

491. TEBBIN, T. and MELO, G. **Patient care profile shows staffing level needed on each shift.** *Hospital Financial Management*, Chicago, 1974, Nov., vol. 28, no. 11, pp. 42-46.

The Patient Care Profile (PCP) system adopted at St Mary's Hospital and Medical Center, San Francisco, to ensure proper ward staffing levels is described. A scheme for classifying patients according to their nursing care needs was first set up and then the average amount of care (in hours) for each category was determined. Each day at noon all patients on the ward are classified and the amount of care they will need for the afternoon, night and morning shifts is assessed. Preprinted tables are then used to calculate the total number of nursing hours required per shift. Daily and weekly reports, which provide a comparison of standard staffing with actual staffing, are prepared. The system enables consistently high quality patient care to be provided and shows up any deficiencies as they arise.

492. DUNKERLEY, D. and MERCER, G. **Wastage among student and trained nurses.** *Nursing Times*, London, 1975, Jan. 30, vol. 71, no. 5, pp. 194-195.

Research into staff turnover has left many basic questions unanswered. More specifically, research into nursing has rarely extended its focus beyond students to trained staff. It would appear that the situation of the trained nurse is somewhat different from that of the student nurse in several important aspects. Trained nurses' reasons for leaving hinge on the amount of job satisfaction that they feel they are receiving. The authors' investigations so far suggest that two sets of factors contribute to the nurse's overall level of satisfaction in her work. Core determinants are pay, the extent of primary group relationships, the amount of communication, and the extent of centralization within the particular hospital. Additional determinants are degree of professionalization, extent to which the job is repetitive, perception of equity in her role, and the priority she gives to her work. A large net balance of dissatisfaction over satisfaction will probably not result in turnover unless the opportunity for alternative employment is high.

493. ARMSTRONG, M. L. **Bridging the gap between graduation and employment.** *Nursing Administration*, Wakefield, Mass., 1974, Nov./Dec., vol. 4, no. 6, pp. 42-48.

Orientation units for new nursing staff were established at Thomas Jefferson University Hospital, Philadelphia, as the traditional short orientation programme was considered inadequate to co-ordinate new graduate activities on different service units, whilst providing meaningful experience for new nurses with widely differing educational backgrounds and clinical experience. To provide a foundation for these units, a decentralized nursing service was created, with assistant directors responsible for the administrative duties of particular clinical areas. The duration of the orientation period would be a minimum of four weeks, and participants were to be graduates from nursing schools other than Thomas Jefferson. Later, these graduates were also included, although they knew the hospital already, to help them adjust to their new work roles.

Certain patient units were then carefully selected as orientation units, considering the willingness of permanent staff to participate in the project and the types of clinical experience they could provide. In-service co-ordinators supervised the orientation programme, which included rotation of new staff to different patient units, so that most were ready to be assigned to permanent working units after four weeks' orientation. Feedback on the programme was provided by questionnaires, for both new graduates and head nurses, and this revealed general satisfaction with the programme; head nurses requested that all new staff should participate in it. A workshop was also held by in-service co-ordinators three months after most new graduates had begun work to continue their educational and leadership development.

494. LUMSDEN, D. B. **Another look at programmed instruction in nursing education.** *International Nursing Review*, Basel, 1974, Nov./Dec., vol. 21, no. 6, pp. 187, 183.

The use of programmed instruction has increased in nursing schools and a variety of programmes are available. No evaluative tests have been carried out on these and such tests are only just beginning in other fields. It is suggested that not all programmes are equally effective and that until research has been carried out care should be exercised in using them.

495. THOMSTAD, B. E. and KAPLAN, B. H. **Nurse clinician: lone commando under fire.** *American Journal of Nursing*, New York, 1974, Nov., vol. 74, no. 11, pp. 1993-1997.

This paper describes the effects on a large urban medical centre of the introduction of an active nurse clinician programme. The new nurse clinician encountered a variety of staff perceptions of her role and to protect herself from pressure worked out a set of objectives. She learned the nurses' reasons for the ways they worked and that deviation from established routine was almost impossible, leading in some cases to an absence of essentials of nursing care. After the clinician had learned about the system and resources she began to take some action for change but met with interference from the system. Crisis point was reached when the system could not alter in such a way as to allow the nurses in the clinics to work in a new way. To alleviate pressures the clinician turned to working directly with medical staff and other health professionals on patient care problems. The clinician now works in a community project and following the working experience discussed in this paper makes recommendations for more effective use of nurse specialists in bringing about change.

496. AYDELOTTE, M. K. **Administration and directors of nursing.** *Hospitals*, Chicago, 1974, Dec. 16, vol. 48, no. 24, pp. 61-63.

A director of nursing must have competence both in nursing and administration: if she needs guidance in the latter the hospital administrator should be able to help. It is essential that the administrator and the director of nursing work in close collaboration, understand each other's problems and supply each other with the information and support needed to carry out their respective tasks. The administrator must ensure that the director of nursing is fully aware of the hospital's goals but must leave her as free a hand as possible in the running of her department.

497. MURPHY, J. **The role of the ward sister.** *Nursing Mirror*, London, 1975, Feb. 13, vol. 140, no. 7, pp. 71-72.

This paper examines the three interacting roles of the ward sister—as a nurse, a teacher and an administrator. An effective ward sister therefore has to be an individual of no mean ability or intelligence. It is questionable whether the present system selects, educates and trains nurses of any intellectual ability for positions as ward sisters. The need for recruiting academically qualified nurses and for training qualified nurses to teach is stressed.

498. HODDER, A. **In-service training of nursing auxiliaries.** *Nursing Mirror*, London, 1975, Feb. 6, vol. 140, no. 6, pp. 40, 42.

The in-service training unit at the General Hospital, Northampton, was established in 1970 and has one nursing officer and two sisters. It holds 'back to nursing' courses, staff appraisal courses, cardiac arrest lectures, management courses, lectures for trained staff, and training for nursing auxiliaries. The training for nursing auxiliaries includes: (i) two-week introductory courses held every month, excluding September, with an average attendance of 10; (ii) one-week 'in-post' courses for nursing auxiliaries who were in the service before the introductory courses began; and (iii) study half days on a variety of subjects. In addition to continuing these courses it is planned to hold in-post courses of one five-hour session per week for five weeks for nursing auxiliaries unable to meet the present course hours. The benefits derived from the training are reviewed.

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 496, 600

499. EWELL, C. M., JOHNSON, A. C. and VON EHREN, W. R. **Administrators identify the problems.** *Hospitals*, Chicago, 1974, Dec. 16, vol. 48, no. 24, pp. 52-55.

To assist in the development of educational programmes in hospital administration the University of Wisconsin, in association with the Wisconsin Hospital Association, sent a questionnaire to 154 hospital administrators. This asked for an assessment of the relative importance of 31 topics and there was a 94 per cent response. The eight topics most frequently listed as major were, in descending order of importance: cost controls; regulation and accreditation; capital financing; insurance and reimbursement; budgetary process and cash flow; medical quality control; declining census; and emergency care. Other findings are set out in four tables.

500. LAW, J. T. **A system for selection and review of hospital programs.** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 17-19.

In 1972 the board of trustees of the Hospital for Sick Children, Toronto, set up a committee to select and review developments and projects for the various hospital departments. This meets monthly to consider recommendations put to it by the hospital's internal programme committee whose members are the executive director,

the research director, the chiefs of paediatrics, psychiatry, radiology and surgery, and the assistant administrator. A standard form (a copy of which is reproduced) is used for all reviews: this asks for details of existing and proposed programmes, estimates of costs, and an indication of priorities. Over the two-year period all programmes have been reviewed and priorities for new developments determined.

501. McEvoy, P. J. **Mortality committee as an educational and administrative tool.** *Lancet*, London, 1975, Jan. 25, vol. i, pp. 210-211.

A mortality committee was established at Kaimosi Friends Hospital, a 120-bed mission hospital in Tiriki Location, Western Province, Kenya. It comprised all those involved in the management of in-patients, and included doctors, medical assistants, nurses, and medical students doing clerkships at the hospital. Throughout 1973 the committee met each month to review the deaths in the previous month. It was agreed that the committee would have no disciplinary function; rather, its aims were to educate staff, monitor performance, make recommendations for upgrading the hospital's service, and collect accurate statistics. Its findings led to an expansion of the community health services based on the hospital. Within the hospital it resulted in extensive alterations in routine procedures, plant, equipment, and a redeployment of staff.

GOVERNING BODIES, COMMITTEES

502. Kovner, A. R. **Hospital board members as policy-makers: role, priorities, and qualifications.** *Medical Care*, Philadelphia, 1974, Dec., vol. 12, no. 12, pp. 971-982.

The role of members of hospital boards in making policy was examined in 47 large hospitals in south-eastern Pennsylvania and south-western New Jersey. The board members completed a questionnaire designed to determine their assessments of: (i) board power relative to the executive director; (ii) key hospital priority areas for the next three years; and (iii) their qualifications to make decisions in these priority areas. The results are presented in nine tables and discussed. The principal findings are: (i) members perceive their powers to be greater relative to the executive director in hospitals than is found in business organizations; (ii) high priority areas were cost control, quality control and relations with third party payers; and (iii) perceived qualifications to make decisions varied with the occupation of board members, a greater proportion of physicians and administrators rating themselves as very well qualified in areas relating to medical care programmes and in relations with special agencies affecting hospital reimbursement and expansion.

503. Festen, H. De samenstelling van het ziekenhuisbestuur. **[Composition of the hospital governing body.]** *Ziekenhuis*, Utrecht, 1975, Jan. 22, vol. 5, no. 2, pp. 34-38.

The task of the hospital board of management is to determine, within the limits set by legislation, the services which the hospital is to provide and to give general guidance: the day-to-day running of the hospital should be left to the professional director. The board should have from five to seven members well known and respected in the local community and perhaps with expert knowledge in such fields as the law, finance, economics and social service. The members should preferably not be controversial

figures and there should be fair representation of the sexes. Members should be independent and impartial and their status should be purely honorary.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract Nos. 462, 520, 601

504. GREMNER, K. Vad är medicinsk rationalisering? **[What is medical rationalization?]** *Sjukhuset*, Göteborg, 1974, vol. 51, no. 12, pp. 764-767.

Medical rationalization is defined as the systematic assessment of medical diagnosis and treatment from a financial point of view. It comprises the development of new products and the planning of medical measures; clinical research is closely related to medical rationalization. It is necessary because of the widening gap between staff needs and resources: rationalization measures increase freedom of choice. Medical rationalization can have the greatest effect at the clinical level, and the central authorities must produce a climate favourable to local efforts. The earlier rationalization measures are set in action, the greater their effect. Every patient is unique; any standardized treatment programme or voluntary reduction in the range of medicines prescribed must be flexible enough to adapt to individual patient's needs. The doctor is the medical expert and the primary responsibility for rationalization is his. But rationalization is not cheap, and the doctor needs the backing and co-operation of administrators, staff and politicians. Qualified staff and administrators cost money, and unless it is provided many economies will be wasted. More research is needed into the areas in which rationalization and change would be of the most benefit.

505. RAFFERTY, J. and SCHWEITZER, S. O. **Comparison of for-profit and nonprofit hospitals: a re-evaluation.** *Inquiry*, Chicago, 1974, Dec., vol. 11, no. 4, pp. 304-309.

An earlier paper which compared for-profit and non-profit hospitals found some evidence of 'skimming' by proprietary hospitals, that is they treat the simpler, more profitable cases but make little contribution to teaching or research [see *Hospital Abstracts*, Vol. 14, Abstract 815]. The authors of this paper believe that the research design led to underestimation of the degree of skimming that occurs. They therefore develop an empirical analysis that indicates the direction in which the conclusions should be adjusted and which offers a preliminary assessment of the degree of adjustment. A number of related issues and questions are raised.

506. NEUMANN, B. R. **A financial analysis of a hospital merger: Samaritan Health Service.** *Medical Care*, Philadelphia, 1974, Dec., vol. 12, no. 12, pp. 983-998.

The Samaritan Health Service consists of four merged hospitals in or near Phoenix, Ariz., and four small rural hospitals which are leased by the service [see *Hospital Abstracts*, Vol. 11, Abstract 1589 and Vol. 13, Abstract 292]. This paper summarizes the major financial analyses from an evaluation of the merger. It demonstrates that, in this particular case, it can be shown that the cost of hospital care in the merged hospitals was contained relative to average costs in other similar hospitals. The research methods are described and the reported results serve as a case study measuring the financial impact of a hospital merger.

RUNNING COSTS

See also Abstract No. 572

507. MISCHLEY, W. A. and SPUEHLER, N. **Complex data in a simple graphic formula.** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 46-49.

The Ohio Hospital Association's (OHA) cost control tool is described. The OHA Service/Cost Index has been developed by the OHA and the Hospital Administrative Services (HAS) programme of the American Hospital Association. The index consists of 29 indicators of quantitative measurements relating to cost, use, manpower effectiveness and other important factors of daily hospital operation. The first 12 indicators relate to patient care services and the other 17 to general management practices or productivity. They pinpoint important cost areas for quick comparisons. There are two bases for grouping hospitals—number of beds and intensity level (similar to bed turnover rate). Each hospital will fall into the low, average or high level of intensity depending on how each ranks with other hospitals of similar size in its reporting group. A graphic format, reproduced in the paper, is used to present a large volume of facts and figures: it can be quickly scanned and easily understood. The indicators are displayed on two grids—patient care and general management. Each grid is divided into four quarters, two below the median and two above it. A marker is placed to show in which of the quarters an individual hospital's data fall for each indicator. Hospital administrators throughout the state have shown an interest in the Index and several educational programmes are under way in connection with it.

BED OCCUPANCY, ECONOMIC USE OF BEDS

508. DODDS, J. J. **Surveillance reduces admissions.** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 52-55.

The author begins by defining a number of terms such as peer review, quality assessment and utilization review, which must be understood in relation to pre-admission certification. The basic criteria and essential elements of pre-admission certification are then set out and the programme of computerized pre-admission certification and evaluation at Campbell General Hospital, Chattanooga, Tenn., is described. When admission for a patient is requested by a doctor the admitting clerk contacts the computer bureau and the admission data are evaluated by electronic data processing. Admission is then either certified or rejected on the basis of insufficient data. The procedure takes less than a minute. If admission is approved the clerk receives a certificate for the patient's chart. This indicates the admitting diagnosis and certified length of stay. About 30 to 35 per cent of cases are denied certification until additional information has been obtained. The programme has been in operation just over a year. During this time data has been collected on 2,200 consecutive admissions. Of these, 75 per cent had diagnoses contained within the computer's memory bank, and the computer was able to approve 67 per cent, the project co-ordinator an additional 20 per cent and the remaining 13 per cent had to be evaluated by a doctor. Patient days decreased by 8.3 per cent on the previous year's figures and admissions decreased by 11.6 per cent. It is thought that admission surveillance makes doctors more selective of the type of patient for whom they request hospital admission. [This paper also appears in: *Hospital Medical Staff*, Chicago, 1974, vol. 3, no. 12, pp. 27-31.]

509. WEAVER, P. G. **Key to cost reduction: the bed utilization review index.** *Dimensions in Health Service*, Toronto, 1975, Jan., vol. 52, no. 1, pp. 14-15.

Holy Cross Hospital, Calgary, instituted bed utilization review in 1971. The basis of the review is a listing of some 750 diagnoses and operative procedures to which the medical staff utilization committee has allocated suggested lengths of stay, based on Professional Activity Study records for Holy Cross Hospital and for Canada as a whole. After a year of operation, the suggested lengths of stay were adjusted. At the end of the suggested length of stay an automatic review procedure is started by medical records staff for patients not discharged. As a result of an analysis of 1973 records a utilization index was devised; this is the ratio of 'total suggested days of stay for a given period' to 'total actual days stay for the same period' expressed as a percentage. A utilization index over 100 indicates efficiency above the set standard; one under 100 indicates efficiency below that standard. In practice it is found that bed utilization tends to reduce cost per discharged patient, but the effect on total hospital costs will depend on the total utilization of the hospital.

510. FIDEL, J. and others. **Admissions to hospital from a rural community in Israel: two years' experience in an experimental hospital-linked health center.** *Israel Journal of Medical Sciences*, Jerusalem, 1974, Dec., vol. 10, no. 12, pp. 1510-1517.

An analysis was made of admissions to hospital during 1971 and 1972 from the populations of nine villages and two kibbutzim served by the Shimshon Medical Centre, Beit Shemesh. Re-admission was rare. While there was a high rate of admission (more than 30 per cent) in children under one year of age, especially from the villages, rates for all other age groups were below comparable national figures. The main reasons for admission were diseases of the respiratory system, followed by gynaecological diseases and obstetric complications, gastrointestinal diseases and accidents, poisoning and violence. Three-quarters of all the patients admitted remained in hospital less than 14 days and less than one per cent stayed more than 100 days. The average stay of the patients in most hospital departments was longer than the average in the hospital with which the centre is associated, and than the national average. It is suggested that a stricter selection of more seriously ill patients may account for this phenomenon. The authors discuss the influence of the primary care system and other factors on patterns of admission and length of stay.

DATA PROCESSING

See Abstract Nos. 508, 515, 568, 569, 576-578, 580, 586, 602

LIBRARIES

511. SAWYER, W. A. and MANGIARACINA, J. **Area health education centers as the foundation for a statewide biomedical communications network.** *Bulletin of the Medical Library Association*, Chicago, 1974, Oct., vol. 62, no. 4, pp. 343-347.

The Medical University of South Carolina has established four area health education centres in community hospitals in South Carolina. These provide residency programmes

for medical, dental, nursing, pharmacy and allied health students and continuing education for all health professionals. This paper describes a plan for providing library and other information services for the centres. The objectives are: (i) to establish a core collection and provide adequate library services; and (ii) provide the skeletal structure for a biomedical communications network.

512. ALGERMISSEN, V. **Biomedical librarians in a patient care setting at the University of Missouri-Kansas City School of Medicine.** *Bulletin of the Medical Library Association*, Chicago, 1974, Oct., vol. 62, no. 4, pp. 354-358.

This paper describes a project at the University of Missouri-Kansas City School of Medicine in which three clinical medical librarians were attached to patient care/teaching teams. Three information dissemination techniques have been developed: (i) LATCH (literature attached to the chart), in which the librarians attend house staff rounds and search for and analyse documents for inclusion in a folder giving medical information pertinent to a patient; (ii) *Current References*, a weekly publication consisting of an editorial and a selection of abstracts representing thoughtful selection of key papers pertinent to problems discussed on rounds; and (iii) a filing system called Latest Topics consisting of a master file of documents retrieved to anticipate users' needs and effectively produce information for a current or repeated request. The clinical medical librarians have also designed a patient care information system which has three parts: (i) the transaction; (ii) an index of pertinent documents retrieved in response to information needs; and (iii) the generation of statistics.

513. DURRANT, J. **A library service to geriatric patients in hospital.** *Health and Welfare Libraries Quarterly*, London, 1974, Dec., vol. 1, no. 4, pp. 87-89.

Northwick Park Hospital provides a library service to all hospitals in the new Harrow Health District and this includes 180 geriatric patients. A variety of material is provided including books, talking books, magazines and recorded music, the last in co-operation with the hospital's radio station. All books are individually selected for they must be attractive, colourful and with legible print for the elderly. A variety of reading aids are available but the machines may appear complicated to the elderly. Regulations are flexible to allow for the needs of individuals. Volunteers man the service and all the hospital staff co-operate to help patients benefit since this is regarded as another form of therapy. The Housebound Library Service of the public library follows up all discharged patients. A recent problem has been the lack of material suitable for elderly Asian patients.

ORGANIZATION AND METHODS, WORK STUDY

See also Abstract Nos. 603, 604

514. MELESKO, S. **Developing work standards for hospitals.** *Management Controls*, New York, 1974, Nov., vol. 21, no. 11, pp. 239-245.

A methodology to establish standards of work performance in operating suites, laboratories and other special departments is described. The method uses the staff

themselves to collect the data concerning their activities. Other methods are described briefly and also the factors affecting the standards and their use. The forms used for data collection are reproduced.

MEDICAL RECORDS

See also Abstract Nos. 563, 587

515. WOOD, J. **Computing records.** *Health and Social Service Journal*, London, 1975, Feb. 15, vol. 85, no. 4426, p. 354.

The application of computers to medical records is outlined and its success questioned. It can be argued that despite its potential the computer has not made such a devastating impact on medical records as was predicted. A computer is dependent on the information fed into it and often the source of the information is unreliable, because there is liable to be a margin of error when dealing with patients and with such factors as arbitrarily defined illnesses. A computer is not capable of exercising any judgment nor is it able to separate the facts from the irrelevancies. Where the computer has been successful the information fed into it has been carefully defined with no margin of error. The use of the computer is still a costly exercise and little cash is given to medical records.

516. OSNES, M. Mikrofilming av sykehusjournaler M.M. ved Sentralsykehuset i Akershus. **[Microfilming of hospital records, etc. at the Central Hospital, Akershus.]** *Sykehuset*, Oslo, 1975, vol. 38, no. 1, pp. 1-24.

Microfilming medical records represents a very significant saving of space, but the following points need clarification before starting: (i) length of time before current records can be down-graded; (ii) rapid recall; (iii) removal of dead patients' notes; (iv) date of commencement of microfilming; and (v) rules for destruction of originals after microfilming. The work of filming 4,669 records at Akershus Central Hospital took 48 working days, the starting rate of 3,300 pages a day rising to 3,500 with practice. A reader filler feeds the film strip into a plastic jacket from one side and cuts the film under optical control, one jacket taking 60 pages (exposures). Out of 100 random case histories, 88 were contained in one jacket, 11 in two and one in three: the numbers of pages varied from 473 to two. A random check of 297 pages revealed 103 unnecessary exposures (35 per cent), comprising covers, blank sheets, temperature graphs, etc. This indicates the need for careful analysis of notes before microfilming. The cost of materials amounted to n.kr. 1.38 (11½p) per exposure, but the type of record filmed proved costly in manpower (and hence wages). A 35 per cent reduction in exposures, and a level of 720 records microfilmed a week, would result in a cost of n.kr. 1.20 (10p) per exposure. The equipment required comprises camera, reader filler, reader, film jacket machine and photocopier.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

517. SCHNEPPLE, G. R. **Arbitration: solution to malpractice dilemma?** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 41-45.

Dissatisfaction with the current system of adjudication of malpractice claims in the

United States has led to the proposing of several alternatives. In this paper the author discusses malpractice arbitration, concentrating on the critical differences between the processes of arbitration and litigation, the applicability of arbitration to the community hospital and the implications for future medical care. Apart from the high cost of malpractice litigation it also affects the quality and efficiency of health care services. It tends to make doctors ultra-conservative and likely to do unnecessary tests for protection in the event of possible lawsuits. Recent judicial decisions and state statutes have encouraged arbitration and a report of the Department of Health, Education and Welfare's Commission on Medical Malpractice recommends it as a rational alternative to litigation. It seems unlikely that arbitration can provide a complete solution to the problem of medical liability and some comprehensive 'risk management' system is needed with effective peer review and medical audit as quality controls. Hospitals are becoming increasingly vulnerable to charges of negligence but adequate insurance coverage and competent legal counsel in conjunction with malpractice arbitration may provide some relief. Nineteen references are given.

OTHER SPECIAL ASPECTS

518. DAVIS, D. E. **Visiting groups: blessing or curse?** *Nursing Times*, London, 1975, Jan. 30, vol. 71, no. 5, occasional papers pp. 5-7.

In a hospital which had over 1,600 group visitors a year, senior staff were concerned over their extent and impact on patients and ward nurses. In an attitude survey, questionnaires were completed by 92 patients and 41 nurses. The principal results from each are listed. The major conclusion from the survey committee was that visiting by groups should be continued. They recommended that: (i) visits should be centrally co-ordinated; (ii) ward nurses should be able to refuse visits; (iii) patients should be able to refuse visits; (iv) the purpose of visits should be clear in advance to those visited; (v) nurses should escort visitors round their own wards; (vi) visitors should be encouraged to talk to the patients, not just look at them; and (vii) patients should be encouraged to show visitors around the ward themselves. The recommendations were implemented and a follow-up showed that they were being followed.

519. HARE, F. **The value of a co-ordinator of hospital visitors.** *World Hospitals*, London, 1974, vol. 10, no. 4, pp. 202-206.

The author, a registered psychiatric nurse, became in 1971 the first co-ordinator of visits at the Bethlem-Maudsley Hospital, London. Her duties include conducting parties (or single visitors) round the hospital, explaining its history and present activities, and acting generally as hostess, guide and friend to those wishing to study the hospital. Since taking up her appointment there have been visitors from over 60 countries; some 1,000 overseas visitors a year, about half of whom are seen by the co-ordinator, come to the hospital. Visits fall into four categories: professional; educational; fact-finding; and sight-seeing. Most visits require considerable preliminary planning.

FINANCE AND ACCOUNTING

FINANCE

See also Abstract Nos. 466, 507, 591

520. KVALHEIM, A. Kostnadsproblem i helsetjenesta: mål og middel i ressursstyringa. **[Financial problems in the health services: aims and methods in resource administration.]** *Norsk Sykehustidende*, Oslo, 1975, Jan., vol. 48, no. 1, pp. 2-7.

The Norwegian health service currently costs six per cent of the gross national product: the rate of growth in the health sector has been of the order of 20 per cent per year throughout the seventies. Over 70 per cent of the expense is for salaries, and since the system is free or virtually free, there is an almost unlimited demand for any service which does not actually hurt! This throws upon the authorities the task of deciding what constitutes a reasonable level of demand and which measures should be applied. Some sort of charges on patients seem reasonable, particularly in view of the fact that cure usually restores earning capacity. The Leon principle is that medical treatment should be applied at the lowest effective level of care, i.e. that as much of the health service as possible should operate at primary care level, only complex cases being admitted to the institutions which need the greatest resources. There is therefore a need to direct resources by: (i) a central procedure for the authorization of plans for any extensions of the system; (ii) control of investments; (iii) tighter controls on refunds to local authorities, abolishing the system which rewards the inefficient and the wasteful; and (iv) control of staff recruitment. Establishment of convalescent homes abroad is preferable to recruiting foreign staff. It is the task of the central authorities to ensure that the nation's resources are applied as efficiently and uniformly as possible.

521. STEVENS, B. J. **Nursing division budget: generation and control.** *Journal of Nursing Administration*, Wakefield, Mass., 1974, Nov./Dec., vol. 4, no. 6, pp. 16-20.

This paper provides a comprehensive view of budget planning, concerned with manpower, current operational and capital budgeting. The nurse executive in charge of finance should have a clear idea of the costs which are solely those of the nursing division, and those which are shared with other divisions. Manpower is usually the largest of the budget items; this should not be reduced so low that the quality of nursing care deteriorates. Extra allowance needs to be made for items such as overtime, holiday pay and emergency staffing. The operational budget finances current expenditure on equipment and supplies. Usually items below a certain price and with a limited life are allowed for in this budget. Consultation with medical staff concerning which division should be responsible for certain items is essential. Inflationary prices, depreciation and costs for various sporadically required items must all be considered under this heading. The capital budget is concerned with major purchases, although the definition of these will vary in different hospitals. Capital purchases may involve unseen costs, such as extra manpower or supplies, and allowances should be made for these. Income, such as fees from nursing students, must then be allowed against these budget items. Nurse executives therefore need a clear understanding of the financial arrangements of their hospitals, and must communicate their budget plans to supervisory staff. In this way, the planned budget programme can reduce costs while retaining quality of care.

522. CLARK, A. M. **Management approaches to basic risks.** *Hospital Progress*, St. Louis, 1974, Nov., vol. 55, no. 11, pp. 43-45.

The aim of 'basic risk' management is to minimize loss from these risks by identifying, measuring and controlling them. A decision has to be made as to which risks should be borne by the hospital itself and which should be transferred elsewhere. All risks which the hospital can absorb without seriously impairing its financial strength should be retained. Others can be transferred, for example, to lessors of equipment, suppliers or contractors (building and maintenance services). The remainder have to be covered by insurance. The paper gives guidance on the various types of risk and the appropriate measures for controlling them.

523. O'CONNELL, J. A. **Risk management for hospitals.** *Hospital Progress*, St. Louis, 1974, Nov., vol. 55, no. 11, pp. 40-42.

Instead of indiscriminately expanding their insurance coverage at increasingly high premiums hospitals should develop progressive 'risk management' programmes which avoid the causes of loss, lessen the operational and financial effects of unavoidable losses, and provide for inevitable losses at the lowest practical cost. Such a programme is outlined in this paper under the following heads: risk management; risk detection; risk evaluation; risk abatement; and risk transfer.

HOSPITAL ACCOUNTING

See Abstract No. 581

SUPPLIES AND STORES

STORES

524. HANNIG, V. **Rainbow tag system controls chargeable supplies.** *Hospital Financial Management*, Chicago, 1974, Nov., vol. 28, no. 11, pp. 30-33, 36.

A system is described for assuring that supply items chargeable to patients' accounts in United States hospitals are correctly recorded and charged to the appropriate department. In central supply a number is given to each supply item and entered on an appropriately coloured tag (according to the department to be charged) which is affixed to the item. Nurses on the ward or department remove the tag and attach it to the patient's charge requisition: these requisitions are collected by central supply at regular intervals.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

525. HUTCHINSON, J. and MURRAY, M. M. **Educational programs for food service supervisors.** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 41-42, 44.

Information is given about training courses in Canada for catering supervisors.

Courses are offered at a number of technical colleges for which the Canadian Dietetic Association has recommended high school leaving certificate with mathematics and one science subject as an entry requirement. The Canadian Hospital Association offers a correspondence course of 10 lessons followed by a two-week intramural session. The Ontario Hospital Association and the Ontario Dietetic Association sponsor an advanced course of 60 hours instruction, either for two consecutive weeks or two days a week for five weeks. There are also a number of packaged programmes using slides or tapes or the self-instructional approach.

DIETETICS IN THE HOSPITAL

526. DAVIES, G. J. and others. **Special diets in hospitals: discrepancy between what is prescribed and what is eaten.** *British Medical Journal*, London, 1975, Jan. 25, vol. i, pp. 201-202.

An assessment was made in four hospitals of the food eaten by 40 patients on special diets restricted in energy, carbohydrate, fat, protein, or sodium. The diets eaten by most patients were significantly different from those prescribed, partly because of patients' unrestricted access to food they possessed or could buy in the ward, but mainly because of the extra or alternative foods provided by ward staff. Not only may the patients' progress be prevented or hindered by excessive consumption but also the lack of progress may be interpreted as indicating that the dietary treatment has failed rather than that it has not been followed.

527. NEAVERSON, C. J. **The work of a dietitian in psychiatric and subnormal hospitals.** *Nutrition*, London, 1974, vol. 28, no. 6, pp. 369-380.

The author was appointed group dietitian to Leicester No. 3 Hospital Group in October 1971; the group has both psychiatric and mental handicap hospitals. The types of meals offered to the patients fall into three categories: general menu, geriatric menu and special diets. A simple master menu plan includes all dishes offered in the month; an example is reproduced. Requests for special diets are recorded in a diet book, which has a different page for each type of diet; the patient's name and appropriate diet colour code are entered against the ward on a graphtex board, which is the cooks' check list. Each day the diet numbers are transferred from the diet book to the daily diet sheet. Weekly diet cards are issued to wards to ensure that the correct patient receives the diet. The dietitian's duties include diet instruction of patients and lectures to catering and nursing students. Some current and future projects in the hospitals for the mentally handicapped are outlined.

FOOD SERVICE

528. BAHR, L. von. Kostförsörjning. **[Food service.]** *Sjukhuset*, Göteborg, 1974, vol. 51, no. 12, pp. 786-787.

Centrally plated meals require very rapid delivery to the wards if the food is to be appetizing on arrival. Meals may have to be kept hot (60°C or 140°F) for up to two hours, but there is no chance of cold dishes going bad in this time, even if their tempera-

ture should rise above 4°C (20°F). A new tray and trolley system, BRS, is illustrated. The tray is divided just off centre, the larger portion being for hot dishes. The trolley has two halves, with hot blocks (heating elements) up the middle and spaces for refrigerated elements in the sides. The trays are inserted with the hot side towards the middle and the cold side out, small dividers preventing the circulation of warm air. The hot side of the tray can be heated by hot air or by microwaves. Suitable choice of menu for the meal served about 17.00 or 18.00, plus up to two hours available for preparing the trolley, makes for smooth single-shift working in the kitchens.

LAUNDRIES AND LINEN SERVICE

LAUNDRIES

529. SPOONER, R. R. **Quality control in laundry services.** *Health and Social Service Journal*, London, 1975, Jan. 25, vol. 85, no. 4423, pp. 176-177.

The growing tendency towards larger laundries with semi-automatic specialized machinery has to be considered in setting quality standards. If quality standards are to be maintained efficiently there must be proper communication (so that the supervisors and staff fully understand what is required), monitoring by checks on process controls and visual inspection of the finished product, and the application of appropriate corrective measures. The quality of the finished product can be divided into cleanliness, finish, and total services: each of these is defined.

530. **More work, less space . . . LM finds way to contend.** *American Laundry Digest*, Chicago, 1974, Oct. 15, pp. 66-68, 70, 72.

In two years the laundry of the Veterans Administration Hospital, Miami, Fla., increased its total output and annual output per employee and reduced its floor space, number of pieces of equipment and cost per pound processed. This was achieved by: (i) changing from all-cotton to blended textiles for linens and uniforms; (ii) abolishing the post of assistant laundry foreman and establishing a merit system to determine a working floor leader; (iii) improving work flow by asking some staff to start work earlier so that linen is available for pressing and dryfolding when the main staff arrive; (iv) re-arrangement of work flow; (v) improved machinery; and (vi) improved staff morale.

531. **Handling blended garments in the laundry.** *Hospitals*, Chicago, 1974, Dec. 16, vol. 48, no. 24, pp. 80, 82.

Recommendations are made for the laundering of polyester/cotton 65/35 fabrics. They should be sorted according to the degree of soiling and machines should be loaded to only 60 per cent of the capacity for cotton. Rinsing should be done at a temperature below 120°F. Polyester/cotton requires less bleaching than cotton. A slow-speed extract on a centrifugal type extractor is all that is necessary. Overheating during the drying process will shorten the life of the fabric and stack temperature should not exceed 165°F: garments should be cooled to room temperature before the drier is turned off. The complete process from washing to finishing should take place on the same day.

532. KAMINSKI, W. Hinweise und Empfehlungen für die Pflege von Flachwäsche (Bett- und Tischwäsche) aus Diolen Cotton in der Grosswäscherei. **[Indications and instructions for the care of flatwork (bed and table linen) of Diolen cotton in large laundries.]** *Krankenhausarzt*, Karlsruhe, 1975, Jan., vol. 48, no. 1, pp. 38-42.

Advice and recommendations are given on the treatment of polyester/cotton flatwork in large-scale laundries. The main points may be summarized as follows: the ratio of laundry in kg. to washing fluid in litres should be between 1:7 and 1:8; detergents and additives specially produced for 'mixed' textiles should be used; oxidation bleaching to be used for slight soiling and chlorine bleaching for normal to heavy soiling; there should be gradual cooling during rinsing in order to avoid temperature shocks; thorough rinsing out of detergent residue and neutralization in the final rinse is necessary; articles should have residual moisture of 25 to 30 per cent when mangled; and the surface of the mangle rollers must be in perfect condition.

HYGIENE IN THE HOSPITAL

HOSPITAL INFECTIONS

533. BRACHMAN, P. S. **Nosocomial respiratory infections.** *Preventive Medicine*, New York, 1974, Dec., vol. 3, no. 4, pp. 500-506.

Hospital-acquired respiratory infections have been widely reported in the medical literature. To estimate the relative risk of acquiring them and to determine their characteristics, data from 117 United States hospitals participating in the National Nosocomial Infections Study of the Center for Disease Control were analysed for the calendar years 1970 to 1973. The data showed that: (i) the overall infection rate for discharged patients was approximately 5.0 per cent and the overall respiratory infection rate was 0.6 per cent or 17 per cent of total infections; (ii) the majority of respiratory infections were in patients on surgical services; (iii) Gram-negative organisms accounted for two to three times more disease than Gram-positive organisms; and (iv) the seasonal variation in disease was minor, with greatest incidence occurring in late winter and lowest in midsummer. Recommendations for controlling these infections effectively begin with the establishment of an ongoing surveillance programme to define the problem. Then, direct control measures should be applied to assist the host in developing or maintaining resistance to infection, to control reservoirs of infection, and to interrupt the routes of transmission.

534. UNITED STATES. NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES. **Workshop on hospital-associated infections.** *Journal of Infectious Diseases*, Chicago, 1974, Dec., vol. 130, no. 6, pp. 680-686.

This is the report of a workshop convened to provide an in-depth discussion of the problem with the broad goals of definition of its magnitude and economic impact, assessment of the current status of knowledge, and development of recommendations regarding areas in which research, development and education might be encouraged to achieve both immediate and long-range dividends in the control of hospital-associated infections. The main recommendations are: (i) basic research must be expanded in the

area of host resistance if long-range rational control is to be accomplished; (ii) there are a number of areas in which more applied research and/or development is both needed and feasible; and (iii) doctors, nurses and other staff must be trained in hospital epidemiology, surveillance and control procedures, to implement and to increase the available knowledge.

535. WILLIAMS, S. V. and others. **Epidemic viral hepatitis, type B, in hospital personnel.** *American Journal of Medicine*, New York, 1974, Dec., vol. 57, no. 6, pp. 904-911.

Between January 1968 and August 1972 there were 79 cases of viral hepatitis, type B, among the staff of the University of Minnesota Hospitals; 34 occurred in staff of the renal ward and haemodialysis unit and 34 in laboratory staff. The evidence incriminates haemodialysis patients' blood as the agent necessary for propagation of the epidemic. Accidental and inapparent parenteral transmission seemed to be the most likely route of infection, although accidental oral ingestion or aerosolization and airborne spread could not be eliminated as possibilities. Additional control measures were implemented and may have been associated with a decrease in the incidence of new cases in the areas of highest risk.

536. MCHUGH, G. L. and others. *Salmonella typhimurium* **resistant to silver nitrate, chloramphenicol, and ampicillin: a new threat in burn units?** *Lancet*, London, 1975, Feb. 1, vol. i, pp. 235-240.

A strain of *Salmonella typhimurium* appeared sequentially in three patients in a burns unit; epidemiological study suggested the occurrence of person-to-person spread. It was responsible for both colonization and invasive infection in these patients, whose burn surfaces were receiving topical treatment with 0.5 per cent silver nitrate solution. The strain proved resistant to silver nitrate, mercuric chloride, ampicillin, chloramphenicol, tetracycline, streptomycin and sulphonamides. This pattern of multiple resistances could be transferred to sensitive recipient strains of *Escherichia coli* and *S. typhimurium*; further transfer of these resistances could be consummated between different strains of *E. coli*. The very real danger of this strain of *S. typhimurium* in burns units stems from its resistance to the two most effective antibiotics (ampicillin and chloramphenicol) available for systemic therapy; and this threat may be compounded through the selection effected by the widespread topical use of silver nitrate solutions and sulphonamide preparations on burned patients.

537. GREAT BRITAIN. MEDICAL RESEARCH COUNCIL. SUBCOMMITTEE ON HEPATITIS PREVENTION IN RENAL AND ASSOCIATED UNITS. **Experimental studies on environmental contamination with infected blood during haemodialysis: a report by a working party.** *Journal of Hygiene*, London, 1975, Feb., vol. 74, no. 1, pp. 133-148.

In order to assess the relative importance of different postulated modes of spread of hepatitis B in haemodialysis units, blood charged with various tracer organisms was used in simulated haemodialysis runs in four laboratories; the resulting contamination of equipment and environment was measured semi-quantitatively. The results included: (i) some airborne spread occurred when tubing containing contaminated blood was needled as the patient went on and came off the dialyser; (ii) virtually no small airborne

particles could be demonstrated however in simulated emergencies in which a blood line was disconnected or even when bottles of blood were dropped on to a hard floor from a height of two metres; (iii) spores from contaminated blood leaked in small numbers into the dialysing fluid through apparently intact coils; (iv) considerable contamination of exposed surfaces and of the proportionating unit cabinet occurred; and (v) minor visible splashing of blood was common in the laboratory experiments and was shown to be also a common event during routine haemodialysis in two of the dialysis units taking part in the studies.

538. KASLOW, R. A. and others. **Enteropathogenic *Escherichia coli* infection in a newborn nursery.** *American Journal of Diseases of Children*, Chicago, 1974, Dec., vol. 128, no. 6, pp. 797-801.

An outbreak of mild gastroenteritis due to enteropathogenic *Escherichia coli* occurred in two separate nursery areas of a 650-bed university hospital. At least 24 infants were infected with the strain in 22 days between admission of the index case and initiation of measures to control the outbreak. There were no deaths, disease was mild, and clinically inapparent infection was frequently found. The outbreak abated abruptly after institution of strict aseptic technique, temporary reorganization of the nurseries, and administration of neomycin sulphate to all infants from the newborn nursery in the epidemic cohort.

539. SEXTON, D. J. and others. **Amebiasis in a mental institution: serologic and epidemiologic studies.** *American Journal of Epidemiology*, Baltimore, 1974, Nov., vol. 100, no. 5, pp. 414-423.

The 3,500-bed Mississippi State Hospital, Whitfield, Miss., reported 127 deaths due to amoebiasis in the period 1953 to 1972. In 1972 a random serological survey of 10 per cent of patients revealed positive indirect haemagglutination (IHA) titres to *Entamoeba histolytica* in 27.6 per cent. Higher rates of seropositivity were found among mentally handicapped patients than among geriatric, psychotic and other diagnostic categories. Distribution of seropositivity among patients did not correlate with patterns of food or water distribution. Seropositivity rates were lower for staff than for patients. Staff in contact with patients had a higher rate (80 per cent) than those not in contact (5.1 per cent). Stool examination of catering and patient-contact staff failed to reveal any cysts or trophozoites of *E. histolytica*. The probable importance of person-to-person transmission is suggested by: (i) deviation from a predicted random distribution of seropositivity among patients; (ii) the significantly increased number of high IHA titres among patient-contact staff; (iii) the absence of evidence for transmission by food or water; and (iv) the presence of unsanitary conditions which would facilitate faecal-oral spread.

540. TEVALUOTO-AARNIO. **Acute hepatitis in an institution for mentally retarded patients in Finland.** *Annals of Clinical Research*, Helsinki, 1974, Dec., vol. 6, no. 6, pp. 366-372.

During a follow-up study of persistent hepatitis B antigen (HB Ag) in Rinnekoti, a hospital for the mentally handicapped near Helsinki, the opportunity was taken to investigate the epidemiology of acute viral hepatitis there. The following conclusions

were reached: (i) both patients and nursing staff had a higher risk of contracting hepatitis than the general population in Finland; (ii) acute clinical hepatitis was frequent among patients with Down's syndrome; (iii) at least one case of HB Ag positive hepatitis in a Down's syndrome patient did not result in a persistent carrier state; (iv) one limited epidemic of hepatitis may not have been associated with HB Ag; and (v) the asocial restless severely handicapped patients were probably the main source of infection, but patients with Down's syndrome are seldom asocial and therefore were not an important source of hepatitis even when they were HB Ag carriers.

SOURCES OF INFECTION

541. MASSARRAT, S., URBAN, M. and SCHIFF, W. Besteht bei der Gastroskopie das Risiko einer Hepatitis-Übertragung? **[Is there a risk of transmitting hepatitis by gastroduodenoscopy?]** *Deutsche medizinische Wochenschrift*, Stuttgart, 1975, Jan. 10, vol. 100, no. 2, pp. 42-45; summary in English p. 42.

Five of 211 patients undergoing gastroduodenoscopy had been carriers of Australia antigen. The same instrument had been used for all and there was a follow-up examination two and four months later. Twelve patients died of their original disease during the follow-up period and two additional patients became positive for Australia antigen. No proven case of hepatitis transmission occurred in this group of patients.

542. KNAPP, U., SANDER, J. and VIEWEG, K. Bakteriologische Untersuchungen an Redon-Saugdrainagen in der Unfallchirurgie. **[Bacteriological study of Redon drains in accident surgery.]** *Deutsche medizinische Wochenschrift*, Stuttgart, 1975, Jan. 3, vol. 100, no. 1, pp. 10-13; summary in English p. 10.

After 80 aseptic operations, 121 Redon drains were bacteriologically examined; 17.4 per cent of Redon tips were contaminated but only 7.4 per cent of wound secretions aspirated from them before they were removed were positive for micro-organisms. Only Gram-positive cocci, mostly of doubtful pathogenicity, were found. The presence of micro-organisms was no pointer to later healing difficulties: the culturing of Redon tips is not therefore a reliable method for early recognition of wound infections. Bacterial contamination of Redon tips in the absence of clinical signs of infection does not justify the administration of antibiotics.

543. STERN, E. L. and others. **Aerosol production associated with clinical laboratory procedures.** *American Journal of Clinical Pathology*, Philadelphia, 1974, Nov., vol. 62, no. 5, pp. 591-600.

Because of the high incidence of viral hepatitis among laboratory staff in the University of Minnesota Hospitals, a study was undertaken to evaluate aerosol production associated with a number of clinical laboratory procedures. It was found that procedures involving the shaking of a specimen within a confined space resulted in abundant aerosol production, while other procedures produced relatively little. Of significance was the considerable bench-top and instrument-surface contamination associated with all procedures.

PREVENTION AND CONTROL

See also Abstract No. 548

544. BENNETT, J. E. **Prevention of hospital-acquired systemic mycoses.** *Preventive Medicine*, New York, 1974, Dec., vol. 3, no. 4, pp. 515-516.

Systemic mycoses, particularly candidiasis and aspergillosis, may be acquired as a direct result of hospital care. Prevention of candidiasis rests upon avoiding therapeutic measures which lead first to enhanced Candida colonization of the patient and then to breaks in tissue barriers. Prevention of aspergillus rests upon protecting the severely immunosuppressed patient from airborne spores.

545. LYSTAD, A. Evaluering av sykehus—hygieniske aspekter. **[Hospital evaluation—hygienic aspects.]** *Sykehuset*, Oslo, 1975, vol. 38, no. 1, pp. 25-30.

There is a clear need for criteria for an evaluation of the hygienic aspects in any extension of an institution. Cross infection is an added complication of hospital care and hospital hygiene aims at isolating the sources and interrupting the routes of infection. An investigation is currently in progress in the surgical and gynaecological departments of Aker Hospital, recording all cases of cross infection and such factors in the construction and operation of the departments as may have affected their occurrence. Other measures comprise: (i) registration of the use of antibiotics; (ii) registration of wound infection; and (iii) the sampling and recording of bacterial isolates. Factors requiring special attention from a hygiene point of view are: (i) design of the department of surgery; (ii) design and equipment of isolation units; (iii) disposal of refuse; (iv) handling of clothing and textiles; (v) cleaning; (vi) personal hygiene and baths; (vii) the sluice; (viii) methods of disinfection; (ix) sterilization centres, routines and equipment; (x) centralized versus de-centralized bed-making; (xi) washing-up; (xii) qualitative assessment of purchases: and (xiii) ventilation, cleanliness of the air and air filtration.

546. REYNOLDS, H. Y. **Prevention and future control of hospital-associated infections commonly caused by gram-negative bacteria.** *Preventive Medicine*, New York, 1974, Dec., vol. 3, no. 4, pp. 507-514.

Hospital infections are a distinct reality for many hospital patients. However, it is possible with presently available measures to substantially reduce the threat of such infection for patients in whom some physical barrier of normal immunity has been bypassed. For these patients, conscientious attention to such things as careful insertion and aseptic care of urinary catheters and intravenous cannulae, and cleanliness of ventilatory equipment and other mechanical devices in intensive care units is needed. In contrast, the potential risk of actual hospital-acquired infection in patients with impaired cellular or humoral immunity is very great. No easy solutions to prevention and effective treatment of infection in these immunosuppressed patients are available. The general approach of protection from harmful bacteria, judicious use of antibiotics when infection occurs, and immunologic reconstitution of the deficient host with specific antibodies and competent phagocytic cells seems encouraging.

547. SHUMAN, R. M., LEECH, R. W. and ALVORD, E. C. **Neurotoxicity of hexachlorophene in the human. 1. A clinicopathologic study of 248 children.** *Pediatrics*, Evanston, Ill., 1974, Dec., vol. 54, no. 6, pp. 689-695.

To assess the susceptibility of human beings to the neurotoxic effects of hexachlorophane demonstrated in experimental animals, a blind clinicopathological analysis was made of 248 children coming to autopsy over a 7½-year period in the two Seattle hospitals to which practically all premature or sick children are referred. Repeated whole-body bathing of premature newborn infants in three per cent hexachlorophane-bearing soap is associated with a vacuolar encephalopathy of the brainstem reticular formation. Its prevalence is related to the number of exposures to hexachlorophane, to the concentration of hexachlorophane, to the birth weight, to the length of survival and to the thoroughness of rinsing. From these observations it is concluded that hexachlorophane should not be used on neonates under 1,400 gm. birth weight and should be used only sparingly in full-term neonates with thorough rinsing.

HYGIENE IN THE OPERATING THEATRE

See also Abstract No. 542

548. OELLERS, B., HEISS, W. H. and BARTH, H. Hygienemassnahmen im operativen Bereich. **[Hygiene regulations in the operating theatre.]** *Krankenhausarzt*, Karlsruhe, 1975, Jan., vol. 48, no. 1, pp. 28-30.

The basic measures to be taken in the interests of hygiene and to prevent the spread of infection in operating suites, recovery rooms, intensive care units and general wards are described. The necessary bacteriological examinations required for the continuing maintenance and inspection of hospital hygiene depend on close collaboration between the clinical areas and the department of bacteriology.

549. EDLICH, R. F. and others. **Technique of closure: contaminated wounds.** *Journal of the American College of Emergency Physicians*, East Lancing, Mich., 1974, Nov./Dec., vol. 3, no. 6, pp. 375-381.

The experimental studies reported in this paper indicate that contaminated wounds closed with surgical tapes have a greater resistance to infection than sutured wounds. The tapes were composed of a tape backing and a chemical adhesive. The findings suggest that subdermal and subcutaneous sutures potentiate the development of infection. A new tape has been specifically designed for wound closure. This is a non-woven reinforced microporous tape. Its microporous structure permits passage of air and water vapour and limits the growth of skin bacteria. Reinforcing rayon filaments have been placed in its backing to prevent breakage. A 'tackifier' has been added to its adhesive to secure the tape to the skin. The development of this new surgical tape greatly facilitates sutureless wound closure.

550. LEIGH, D. A., SIMMONS, K. and NORMAN, E. **Bacterial flora of the appendix fossa in appendicitis and postoperative wound infection.** *Journal of Clinical Pathology*, London, 1974, Dec., vol. 27, no. 12, pp. 997-1000.

Bacteria were isolated from 153 swabs (47.5 per cent) of the appendix fossa in 322 patients undergoing appendicectomy. The most common organism was Bacteroides

species found in 78 per cent of specimens. Other Gram-negative bacilli, such as Klebsiella or Enterobacter, and *Escherichia coli* were present in 29 and 27 per cent respectively. Gram-positive cocci were less frequently isolated. A positive culture was obtained more commonly in perforated appendix (79 per cent) than where chronic fibrosis, lymphoid hyperplasia or acute appendicitis was present or when the appendix was normal. The incidence of wound infection was 19 per cent and varied according to the state of the appendix, being 63 per cent in perforated appendix and 9.5 per cent where lymphoid hyperplasia was present. Bacteroides were isolated from over 90 per cent of the wound infections. In patients with perforated appendicitis, the incidence of wound infection was 15 per cent where effective chemotherapy was given and over 50 per cent where chemotherapy was absent or inappropriate. It is important that the chemotherapy of post-appendicectomy infections include an antibiotic active against Bacteroides.

STERILIZATION

551. NYSTRÖM, B. and HAGLÖF, K. Hygieniska synpunkter på värmekänsliga instrument mm. **[Hygienic aspects of heat-sensitive instruments.]** *Sjukhuset*, Göteborg, 1974, vol. 51, no. 12, pp. 773-775.

Many instruments which must be sterile when used are sensitive to heat, including both normal multi-use instruments and expensive, supposedly disposable items. This presents a list (with explanatory remarks) of 60 of the more common instruments tabulated by type (catheters, angiography, endoscopy, fibrescopes, ventriculography, neurosurgery and eye work), degree of microbiological cleanliness required, and whether multi-use or disposable. The method of treatment is then detailed by: (i) disinfection (by phenol or by buffered glutaraldehyde); (ii) rinsing (water, saline, ultrasound, steam, ethanol or rinsing solution); and (iii) sterilization (autoclave, hot air, low temperature steam plus formalin gas, buffered glutaraldehyde, ethylene oxide or radiation). A warning is added against using buffered glutaraldehyde for too many days in succession: the substance is also toxic, and rinsing must be very thorough.

552. RYCROFT, J. A. and MOON, D. **An 'in-production' method for testing the sterility of infusion fluids.** *Journal of Hygiene*, London, 1975, Feb., vol. 74, no. 1, pp. 17-22.

This paper describes a method for testing the sterility of intravenous fluids which: (i) does not involve much extra work in terms of technicians' time or materials; (ii) can be carried out by quality control staff in the pharmacy; and (iii) does not involve opening the test bottle or any other procedures by which contamination could be introduced accidentally. The method involves addition of dehydrated broth powder to a random selection of bottles from each batch of infusion fluids immediately before sterilization, followed by incubation of the bottles after sterilization. The methods of preparing the suspensions and test bottles are described. Investigations have shown that the procedure offers at least as good a safety margin as conventional methods in which a whole bottle is cultured.

AIR HYGIENE

See Abstract No. 570

DISPOSAL OF WASTE

553. HENNING, J. **How to put waste to work.** *Modern Healthcare*, Chicago, 1974, Dec., vol. 2, no. 6, pp. 49-52, 54.

This paper describes three systems for making use of refuse. The modular integrated utility system is a new pilot programme sponsored by the federal government. Its objective is a total energy plan, with the recovery of energy generated by electricity and the burning of solid wastes as key elements. The Medical Area Service Corporation, Boston (a shared services group owned by eight hospitals and two affiliates) is developing a shared power plant, which will include the recovery of energy produced by solid waste incineration. The 350-bed Memorial Hospital of Jacksonville, Fla., has installed a heat recovery device on its pyrolytic incinerator.

SAFETY MEASURES

554. NEWMAN, G. M. **Basic elements of a loss control program.** *Hospital Progress*, St. Louis, 1974, Nov., vol. 55, no. 11, pp. 46-49, 70.

Every hospital should have a safety programme designed to prevent accidents happening rather than as a maintenance device after accidents have happened. The components of such a programme are outlined under a number of main heads. These are: management, leadership and responsibility; delegation of authority; maintenance of a safe hospital environment (including patient, staff and visitor safety, fire prevention and disaster planning); employee selection and training; accident and incident investigation and record keeping; medical and first-aid procedures for staff; maintaining staff interest; and security.

ACCIDENTS IN GAS AND DRUG ADMINISTRATION

555. BODLANDER, F. M. S. **Deaths associated with anaesthesia.** *British Journal of Anaesthesia*, London, 1975, Jan., vol. 47, no. 1, pp. 36-40.

During the period 1963-1972 anaesthesia was administered to 211,130 patients at the Royal Prince Alfred Hospital, Sydney, Australia: there were 408 associated deaths, an incidence of 1:502. Although during the period 1952-1962 the comparable figure is 1:1,208 the number of deaths attributable to anaesthesia alone was 3.7 per cent in 1963-1972 as compared with 20.9 per cent in the earlier period. Since 1962 there have been significant changes in the pattern of surgery: for example, operations using cardiopulmonary bypass, for abdominal aortic aneurysms and major neurosurgical procedures, have increased significantly. More than half of the deaths were associated with cardiovascular and neurosurgical procedures. A detailed analysis of the deaths associated with anaesthesia is set out in a series of eight tables.

FIRES AND FIRE PREVENTION

556. BARLOW, J. A., NEWMAN, M. A. C. and AKINSANYA, J. A. **Fire precaution methods in hospital.** *Nursing Times*, London, 1975, Jan. 16, vol. 71, no. 3, occasional papers pp. 1-4.

This is a report of a survey of fire prevention methods in hospitals in the United Kingdom undertaken by 30 third-year student nurses. Six students randomly selected one hospital in each of the groups listed in the *Hospitals Year Book* and a list of 500 hospitals was prepared. A questionnaire was compiled and submitted to a qualified fire prevention officer for comments and advice. A total of 22.8 per cent of the questionnaires were returned covering hospitals of all types and sizes. This report of the findings of the survey gives information on the hospitals covered as regards: number of beds; location of buildings; fire fighting equipment; operation of fire alarms; appointment of fire prevention officer; attendance at fire prevention lectures; checking fire fighting equipment; fire extinguishers in use; instructions to staff; incidence of fires; fire drills; and investigation of fire outbreaks. Reference is made to the cost of fire prevention and some observations on the findings are made. These are: (i) the lack of qualified fire prevention officers trained for the purpose makes uniform standards difficult; (ii) compliance with the minimum standards laid down would lead to greater fire safety; (iii) staff should be trained in the procedure for dealing with fires, especially how to raise the alarm, what are the alternative escape routes from wards and departments and where the fire extinguishers are and how to use them; and (iv) some types of building (e.g. old poor law institutions) and modern building materials present special hazards.

PLANNING FOR MASS EMERGENCIES

557. HART, R. J. and others. **The Summerland disaster.** *British Medical Journal*, London, 1975, Feb. 1, vol. i, pp. 256-259.

On the evening of 2 August 1973 the Summerland leisure complex in the Isle of Man was engulfed by fire within a few minutes; there were about 3,000 people, mostly holidaymakers, in the complex at the time. The 200-bed Noble's Hospital, Douglas, serves the island's 56,000 residents as well as the 500,000 yearly visitors. It has seven intensive care beds, but no separate burns unit. This paper describes the reception, admission and subsequent management of casualties from the fire. A senior member of the staff assessed priorities and directed casualties to different pre-arranged teams, and a nurse was allocated to each patient to aid continuity of treatment and documentation. In the author's opinion, expensive and disruptive rehearsals of disaster plans are of limited value but regular revision and discussion of major accident procedures with all members of the staff and co-ordination with other rescue workers are important.

THE PATIENT

ADMISSION AND RECEPTION

See Abstract No. 508

WELFARE OF THE PATIENT

See also Abstract Nos. 592, 597, 605

558. KRAMPE, W. and others. Patientenwünsche: eine Untersuchung. **[Patients' preferences: a survey.]** Düsseldorf, Ministerium für Arbeit, Gesundheit und Soziales des Landes Nordrhein-Westfalen, [1974], 40pp.

The North Rhine/Westphalia Ministry of Labour, Health and Social Affairs has carried out a survey of hospital patients' preferences to assist them in the planning of future hospital projects. A total of 2,500 patients from 31 selected hospitals answered 57 questions. Some of the points made were the following. On visiting: 16.3 per cent would prefer visits only on certain days; 49.3 per cent wanted daily visits at a fixed time; and 34.4 per cent wanted visits to be at any time on any day. On the number of beds per patients' room: 6.6 per cent preferred single rooms, 45.7 per cent double rooms, 39.6 per cent three-bed rooms and 8.1 per cent rooms with four or more beds. Amenities in patients' rooms were put in the following descending order of importance: sitting area, radio, enclosed washbasin, toilet, telephone, television, bath or shower.

559. DAVENPORT, R. R. and others. **Dietitians, nurses teach diabetic patients.** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 81-82.

Nurses and dietitians are using a team approach at the Veterans Administration Hospital, Little Rock, Ark., to give instruction to diabetics and their families. A videotape is used at the classes. These begin with a discussion between a nurse and three patients on the disease process and coping mechanisms, followed by a dietitian discussing the management of diabetes through diet and demonstrations of two-drop double voiding 'Clinitest' and of acetone testing methods. After the videotape a nurse and a dietitian lead a discussion with patients. Self-administration of medication is taught on the individual units. A pre-test is used to ascertain the patient's knowledge of diabetes and its management and the patient's understanding of the disease is evaluated in the class session. The nursing staff reinforce the group teaching on an informal one-to-one basis. Handouts explaining the disease process and proper food care are given to each patient and a diet booklet is given to each patient after his individual diet instruction. The public health nurse co-ordinator conducts weekly discharge planning conferences on each nursing unit. Information on each diabetic patient is sent to the public health nurse. Discharge plans are co-ordinated with the nursing staff, dietitian, social worker and doctor. Patients receive the necessary supplies on discharge and after instruction all patients who are physically able are allowed to do their own Clinitest and administer their own insulin.

560. AMERICAN HEART ASSOCIATION. COMMITTEE ON ETHICS. **Ethical implications of investigations in seriously and critically ill patients.** *Circulation*, New York, 1974, Dec., vol. 50, no. 6, pp. 1063-1069.

The Committee on Ethics of the American Heart Association is a standing committee with members who serve for five years. It discusses one major topic per year and prepares a summary of that discussion. This paper is a summary of a discussion held in 1972. It presents the best opinion of the Committee and tries, also, to include the areas about which individuals on the Committee are undecided or not in agreement.

The points covered include: special considerations for research in serious and critical illness; definitions; general legal principles; rules and responsibilities of the clinical investigator; physician/investigator and physician/friend; and informed consent.

HOSPITAL SOCIAL WORK

561. Russo, R. M. and others. **Detecting, referring families needing services.** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 56-59.

At Kings County Hospital Center, Brooklyn, N.Y., which serves a mixed, lower income, black and Puerto Rican population, an 11-month study of paediatric out-patients and their families was undertaken in order to focus on a method of detecting families needing social service. The average number of visits per day is 328. Two social workers were assigned to the interviewing of parents, and families were chosen by a tirage doctor. A control group was formed by selecting every fourth family without regard to the study criteria. Patients who fell into the following categories were referred: (i) one or both parents less than 18 years old; (ii) families seeking services at the Center for the first time; (iii) families with one living child less than one year old; (iv) those whose complaints indicated need for extensive social services; and (v) those with falling paint or plaster in their homes. Fifteen per cent of selected families qualified for more than one category. Each family was given a standard interview and the services deemed necessary by the social worker. Needs were either immediate and short-range or immediate and long-range. Results are set out in a table and described. Tirage identified 52 families a day as qualifying for at least one of the five categories. The success of a method of this kind is only as effective as the categories chosen. The use of other possible categories might reveal large numbers of families with social service needs. The selection process must be kept simple and quick. An important factor to consider is the ability to handle effectively the problems uncovered.

THE GENERAL PRACTITIONER AND HIS PATIENTS

See Abstract Nos. 568, 598

TRANSPORT OF PATIENTS

See Abstract No. 585

HOSPITAL CARE

See also Abstract Nos. 501, 504, 593, 594, 606

562. Jacobs, D. J. **Care ensured for unassigned patients.** *Hospitals*, Chicago, 1975, Jan. 1, vol. 49, no. 1, pp. 79-82.

Hospitals have an increasing number of unassigned out-patients (patients without private physicians) who are in need of admission. Responsibility for them is usually

delegated to attending staffs as a requisite for staff privileges and under some form of rotational coverage by specialty. This procedure is being questioned by private physicians for many reasons. At the 321-bed Peninsular General Hospital, Salisbury, Md., a committee of physicians, trustees and administrative staff considered the problem and recommended that it be the responsibility of each clinical department to provide proper professional coverage for all patients, and that they should have flexibility in discharging this responsibility. If a department cannot discharge its responsibility it must co-operate with the administration in solving the problem. The board of trustees rejected the committee's report, but instructed the administrator to follow its guidelines in negotiations with three professional associations (medicine, surgery, and gynaecology and obstetrics) to provide coverage. Recruitment of physicians for the professional associations proved remarkably easy. After one year's experience the system is considered to be remarkably successful.

563. DAVIS, B. C. and others. **Implementation of problem oriented charting in a large, regional community hospital.** *Journal of Nursing Administration*, Wakefield, Mass., 1974, Nov./Dec., vol. 4, no. 6, pp. 33-41.

The problem oriented system of charting (POSC) was established at the Western Pennsylvania Hospital, following a one-year programme of study, planning and teaching. The responsibility for planning, teaching and implementing POSC was given to the staff development group in the nursing department. The principal objective of the system was to allow the nursing team to provide systematic, scientifically oriented nursing care. Other objectives aimed to increase the status of professional nurses and to provide a clinical situation where students could receive systematic education. Four special forms were prepared to provide the necessary documentation for POSC, examples of which are reproduced: (i) admission assessment, completed by a professional nurse as a part of the admission procedure; (ii) problem list, which identifies all present and past medical problems exhibited by the patient; (iii) nursing care plan, which details nursing action to deal with each problem and helps determine both long- and short-term care objectives; and (iv) nursing clinical record, which records the patient's response to the various types of treatment administered. A course of instruction in the programme was then prepared, and a pilot study nursing unit was chosen. The implementation of POSC in this unit was successful, and plans for the hospital-wide implementation of POSC were effected. The adoption of POSC has encouraged improvements not only in charting and data processing, but also in relationships between staff and patients.

564. LAMERTON, R. C. **The need for hospices.** *Nursing Times*, London, 1975, Jan. 23, vol. 71, no. 4, pp. 155-157.

Britain's 30th hospice for the dying is now being planned and the Department of Health and Social Security is becoming increasingly involved in the provision of such hospices. A busy general hospital is often unsuitable for dying patients who need peace; even a special terminal ward is not a good solution though the small separate units (in the hospital grounds and sharing its facilities) which are now being tried, seem to offer a good compromise. In a hospice setting the whole care team can work together and doctors and nurses can develop special skills to help the dying. They have time to look at their patients as people, to listen to them and talk with their families. The

chaplain must be well integrated into the team because spiritual help is often needed. Hospices must be teaching units with nurses, social workers and medical and theological students working in them for short periods and being given lectures and training. By having a home care service the hospital can nearly treble the number of patients under its care. Hospices usually have a reputation for good care and a cheerful atmosphere but some admit some long-stay patients so as to counteract the idea that everyone there is dying. It is important to involve the local community in the hospice by means of open days, voluntary helpers and social events. Photographs of several hospices are given.

565. BELLIN, L. E. **PSRO—quality control? or gimmickry?** *Medical Care*, Philadelphia, 1974, Dec., vol. 12, no. 12, pp. 1012-1018.

The implementation of health care quality control programmes requires procedures no less complex than those of the programme itself. Previous efforts to implement programmes have foundered on: (i) lack of enthusiasm of major third party payers; (ii) functional inadequacies of utilization review committees; and (iii) conflict of interests of medical societies. If Professional Standards Review Organizations (PSRO) are to be effective rather than ceremonial, evaluation that is arm's length between evaluator and practitioner is indispensable. The PSRO is the last chance for organized medicine to demonstrate that it can and will control those practitioners who habitually violate its ethical and professional norms. The paper lists other options should the presently structured PSRO programme fail.

566. BLUM, H. L. **Evaluating health care.** *Medical Care*, Philadelphia, 1974, Dec., vol. 12, no. 12, pp. 999-1011.

Evaluation of health care is equated with the intent to continuously improve rather than to control its quality. Quality is seen as being affected by and therefore embracing: (i) patient's health status and attitudes on entry to care; (ii) suitability of the delivery machine (structure); (iii) application of care (process); and (iv) outcomes of application to care. It is suggested that analysis in depth at two points of this paradigm, the entry to care and the outcomes of care, are the most likely to reveal the basis of failures. These may largely reside with the patient, the health care delivery structure, or the inability of the patient and care deliverer to perform together appropriately. These suggest the kind of interventions most likely to provide good results in the future. Such interventions or changes are very likely to call for significant changes in many social institutions, including that of the health care delivery machinery. Focussing on process is seen as contributing to professional education but less likely to result in meaningful changes because it works on the assumption that what the professional offers in a given illness cycle is the main factor in achieving better quality care.

DISCHARGE OF PATIENTS

567. WEINBACH, R. W. and DODGE, D. D. **Educating for discharge planning.** *Hospitals*, Chicago, 1974, Dec. 16, vol. 48, no. 24, pp. 72, 74, 76.

The author describes courses in discharge planning held in South Carolina in June 1973. Attendances averaged 35 per session and were attended primarily by social

workers and nurses, but doctors, administrators and medical record officers also took part. The aspects covered included the elements of a discharge planning service, case identification and service delivery and the links between hospital and community services. The course then broke up into small discussion groups which later re-united and reported to each other. Participants found the courses to be valuable and the exchange of ideas and information was appreciated.

568. ACKMAN, C. F. D. and others. **Computerized discharge summaries.** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 38-40.

The computerized system for preparing discharge summaries at the Royal Victoria Hospital, Montreal, is described. A three-part questionnaire covering demographic data, background information, symptoms and complaints, complete mental status, treatment methods, changes while in hospital, the results of tests, final diagnosis, prognosis, discharge medication and future plans is coded and key-punched. The printout is partly columnized and partly in narrative style. One section, the history of present illness, could not be computerized because it is too varied to be reduced to a series of multiple choice answers: the printout leaves space for this report to be added. The system was introduced in October 1973 for the psychiatry department and preparations for its use in the urology department are at an advanced stage: other departments have also shown an interest.

HOME CARE, AFTER-CARE

See Abstract Nos. 595, 599

SPECIAL DEPARTMENTS

See Abstract Nos. 464, 514

OPERATING SUITES

See also Abstract Nos. 472, 473

569. MOLL, D. B., LANDE, M. A. and BUCKLEY, J. J. **O.R. information system implemented.** *Hospitals*, Chicago, 1975, Jan. 1, vol. 49, no. 1, pp. 55-56, 58-60.

This paper describes the low cost, easy to use, computer-based information system developed for the operating department of the University of Minnesota Hospitals. Programmed Operating Room Information System (PORIS) provides current, accurate and detailed information about the activities of the operating rooms, making improved use of the facilities possible. The circulating nurse completes a special input form, combined with the operating theatre record (sample reproduced), during each surgical procedure. After each operation, the input is passed to a data control clerk, who edits it and sends it to the computer centre. The data are processed weekly on a Burroughs B3500 computer. Twelve major reports are generated weekly, monthly, quarterly, semi-annually, annually and on demand. The uses to which these are put are outlined. PORIS has enabled effective changes to be made in allocation of nursing staff, providing

relevant experience for new nursing staff, analysis and control of departmental effectiveness, budgeting for equipment and supplies and preparation of statistics.

570. MURRIN, K. R. **Atmospheric pollution with halothane in operating theatres: a clinical study using activated charcoal.** *Anaesthesia*, Oxford, 1975, Jan., vol. 30, no. 1, pp. 12-17.

Activated charcoal will adsorb the organic vapours commonly used in anaesthesia. An investigation was carried out to provide further information about the effectiveness of a charcoal canister when effluent gases from the patient were passed through it in the recommended way. Comparable operating lists in the same theatre were studied with and without the use of the charcoal canisters. Considerable reductions of halothane pollution in the operating theatre environment can be achieved when canisters are attached to the expiratory limb of the anaesthetic circuit. This study indicates that the efficiency is greatest with cases requiring endotracheal intubation. If the facemask is used, it is essential to achieve a tight seal with the contours of the face to eliminate unnecessary pollution.

PHARMACY

571. ADELMAN, D. and KATZ, S. **Pharmacy: four/three for staffing satellites.** *Hospitals*, Chicago, 1974, Dec. 16, vol. 48, no. 24, pp. 68, 70.

Brookdale Hospital Medical Center, New York, operates a decentralized unit dose drug distribution system with 'satellite' pharmacies serving about 72 beds each. 'Satellites' are manned by pharmacists working a 07.00 to 18.00 day: two pharmacists are allocated to each satellite and they are on duty alternately, each doing four days one week and three the next. This gives them the same working hours as the pharmacists in the central pharmacy who do a 35-hour week. The system has proved to be satisfactory.

572. MARSHALL, G. **Clinical program may effect savings.** *Hospitals*, Chicago, 1974, Dec. 1, vol. 48, no. 23, pp. 79-80, 102.

A recent study of 19 hospitals showed that 15 of them could cut overall costs significantly by starting a clinical pharmacy programme. All but three of the hospitals studied ranged in size from 100 to 500 beds. Projected savings ranged from $1.25 to $0.079 per patient day. The study indicated that although a clinical pharmacy programme would increase pharmacy costs the increases would usually be offset by savings in nursing costs associated with medication activities. There was a wide range of pharmacy staff costs per patient day, hospitals with from 101 to 300 beds spending between 48 cents and $1.957 and those with 301 to 500 beds spending from $0.661 to $1.699. Generally the wider the scope of existing pharmacy services the greater the potential savings with clinical pharmacy services. Projected costs of programmes for the hospitals studied were based on those at Memorial Hospital Medical Center of Long Beach, Calif., which has a clinical pharmacy programme including unit dose drug distribution, an intravenous drug admixture programme, clinical practice in patient care areas and a drug information service. Key cost indicators were identified to evaluate the tangible economic factors involved in implementing clinical pharmacy.

Tables in the text illustrate the economic effect of changing to a clinical pharmacy programme, pharmacy staff costs with existing systems and the projected savings in nursing time per patient day.

573. SWIFT, R. G. **Semiautomated, centralized unit dose.** *Hospitals*, Chicago, 1975, Jan. 1, vol. 49, no. 1, pp. 72, 74, 76.

The 922-bed Methodist Hospital, Memphis, Tenn., initiated a unit dose distribution system in 1967 and extended it to the whole hospital in November 1970. The pharmacy provides a 24-hour service. Prescriptions are received in the pharmacy via a pneumatic tube system. A pharmacy technician writes the necessary information on a computer punch card, called the master dose card. This is used as the patient's daily drug order and is used by the pharmacy technician in stocking the unit dose trolleys which are exchanged at the 33 nurses' stations twice daily. The colour-coded master dose cards are preprinted with details of over 200 common drugs. All the information on the cards is checked by a pharmacist before they are fed into a reproducer, which generates the computer punch cards for use by the accounting office in charging patients. Preparation of the unit dose trolleys and the duties of the pharmacists and pharmacy technicians are described. Areas not covered by the unit dose system are discussed and some problems mentioned.

574. WELK, P. C. and SELPH, G. L. **A comprehensive intravenous therapy and admixture program in a 200-bed community hospital.** *Hospital Pharmacy*, Philadelphia, 1974, Dec., vol. 9, no. 12, pp. 469, 472-473.

The pharmacy at the King's Daughters' Hospital, Staunton, Va., provides intravenous (IV) therapy and admixture services involving both pharmacists and nurses. The pharmacy staff consists of two pharmacists, three registered IV therapy nurses, two licensed practical nurses, three pharmacy technicians, a clerk typist and a secretary. The pharmacy is open seven days a week from 07.00 to 23.00, with a pharmacist on duty from 08.00 to 18.00 and on-call at other times. IV admixtures and all other scheduled IV fluids are prepared by the specially trained licensed practical nurses supervised by the pharmacist or registered nurse on duty; they are administered by the IV therapy nurses. Details are given of the procedures followed.

LABORATORIES

See also Abstract No. 543

575. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSINSTITUT. Avsaltat vatten för laboratoriebruk: utformning och dimensionering av jonbytaraggregat och regeneringsanläggningar. **[Desalinated water for use in laboratories: design and size of ion exchange units and regeneration installations.]** (Spri råd 5.18) Stockholm, Spri, 1974, 18pp.

Desalinated water is used in hospital laboratories in analyses of reagent preparations, final rinsing in laboratory dishwashers, etc. This publication gives advice on the demand for desalinated water and on the installations necessary for its preparation, including distribution pipe systems and outlet valves and connections. Testing, inspection, care

and maintenance are also discussed. [This abstract has been prepared from an English summary of the publication.]

576. ALPERT, N. L. **Clinical laboratory computer systems.** *Lab World*, Los Angeles, 1974, Oct., vol. 25, no. 10, pp. 38, 42-43; Nov., vol. 25, no. 11, pp. 32, 34, 36, 38; Dec., vol. 25, no. 12, pp. 26, 28, 30, 32.

This series of papers: (i) outlines the role and function of clinical laboratory computer systems; (ii) describes three available commercial systems, BSL Clindata, DNA Uni-Lab and LCI Labcom, and experience with each in hospitals; and (iii) custom-designed systems in the Youngstown (Ohio) Hospital Association, Genesee Hospital, Rochester, N.Y., and St Vincent's Hospital/Medical Center of New York.

577. GRAY, C. H. and others. **Implementation of a British computer system for laboratory data handling.** *Journal of Clinical Pathology*, London, 1974, Dec., vol. 27, no. 12, pp. 1005-1012.

This paper describes the development and implementation of a small real-time computer system for the handling of patient and test result data in the chemical pathology laboratories of the King's College Hospital, London, group. The equipment consists of a 12K Micro 16P computer, CDC 9421 dual disk drive, Normalair-Garrett reader, ICL 667 line printer and six on-line teletypes, two of which are sited at St. Giles Hospital and Dulwich Hospital, each about 1½ miles from the laboratory. Work destined for subsequent reporting by the computer is entered by continuous on-line teletype. Test result data from multichannel analyses are input using an on-line trace reader. Cumulative reports are printed both by line printer at the central laboratory and by the teletypes at the two peripheral hospital laboratories. In a working day over 4,000 new items of data are generated and 300 to 500 reports are printed. The use of a trace reader as an input device and the method of using a high capacity disk to give both speed of operation and limited archive facility are discussed.

578. DYER, R. S., LUNDY, J. and CHAMBERS, R. W. **A computerized data management system for a regional clinical virology laboratory.** *Computers in Biology and Medicine*, Oxford, 1974, Dec., vol. 4, no. 2, pp. 223-227.

This paper describes a computerized virology data management system which was developed for a regional clinical virology laboratory servicing 17 area hospitals. Access to the PDP-11/20 computer is through high-speed teletypewriters in the laboratories. MUMPS language with a conversational mode program was used to allow technical and clerical staff to operate the system with minimal training time investment. It can be readily applied to any microbiology system.

579. LINES, J. G. **Clinical biochemistry services for liver transplantation.** *Annals of Clinical Biochemistry*, London, 1975, Jan., vol. 12, no. 1, pp. 14-18.

The first significant successes with human liver transplantation took place only in 1968, but the future for this new procedure now seems assured. Its success is heavily dependant upon the provision of pathology services, in particular from clinical biochemistry. The experiences with some of the 39 British liver transplants carried out so far are recorded. At operation, a minimum of 20 technician-hours, usually outside

normal working hours, is required. In the immediate post-operative period, intensive biochemical monitoring is essential. Once the major homeostatic mechanisms are re-established after surgery, the principal biochemical investigations are those of organ function. While no specific test for rejection is available, the diagnosis of rejection can be made from results of the routine pathology investigations. The role of the clinical biochemistry laboratory in the management of these patients is to provide reliable results seven days a week on a range of tests. The clinical biochemist is also well placed to contribute to the solution of some of the outstanding problems of organ transplantation.

BLOOD TRANSFUSION DEPARTMENT

580. FRANKFURTER, G. M., KENDALL, K. E. and PEGELS, C. C. **Management control of blood through a short-term supply-demand forecast system.** *Management Science*, Providence, R.I., 1974, Dec., vol. 21, no. 4, pp. 444-452.

This paper describes the design, development, implementation and operation of a short-term blood inventory level forecast system. The primary purpose of the system is to alert blood centre management to the short-term inventory level of blood supplies so that they can take corrective action to either reduce or increase blood collections. The model is operated daily through a time-sharing computer system and is written in BASIC language. It forecasts blood inventory levels 14 days in advance. The model consists of four sub-models: (i) blood transfusions forecast model; (ii) blood expirations forecast model; (iii) blood collections forecast model; and (iv) blood inventory projection model. A test is performed on the system, and it is demonstrated that management took action to reduce collections in response to higher than necessary inventory levels and increased collections during a period when insufficient inventory levels were forecast.

DIAGNOSTIC X-RAY DEPARTMENT

See also Abstract No. 464

581. SMALLEY, J. P. **The teacher-principal's responsibility in compiling school records—costing.** *Radiography*, London, 1975, Jan., vol. 41, no. 481, pp. 10-14.

This paper aims to give guidance to principals of schools of radiography on the fundamentals of budgeting and costing. A rough specimen budget for a school with 30 places is reproduced as well as an example of computer coded costing. The compiling of costing records by the principal is time consuming and should be reduced to a minimum. Certain essential records must however be kept and these are dealt with in some detail. They are: salaries and fees; financial provision for educational courses for teaching staff; post-diploma education for radiographers; bursaries; and the library.

RADIOTHERAPY DEPARTMENT

See Abstract No. 474

PHOTOGRAPHY DEPARTMENT

582. HEISS, W. H. Photographie im Allgemeinen Krankenhaus. **[Photography in the general hospital.]** *Krankenhausarzt*, Karlsruhe, 1975, Jan., vol. 48, no. 1, pp. 32-35.

The increasing use of photography for medical records of wounds, and endoscopy and operation findings has led to the setting up, particularly in teaching hospitals, of photography departments. This paper discusses the equipment and space requirements of such departments as well as the polaroid process, film photography and the preparation of colour transparencies. Unfortunately Germany has at present no special school of medical photography. There is a shortage of suitably trained photographers and often the work has to be done by a technician who is specially interested in photography, a radiographer, or a doctor with some knowledge of photography.

PHYSIOTHERAPY DEPARTMENT

583. MCLAREN, J. B. **Analysing a physiotherapy out-patient service.** *Health and Social Service Journal*, London, 1975, Jan. 25, vol. 85, no. 4423, pp. 181-182.

A survey has been made of physiotherapy services for out-patients in a district served by a 527-bed district general hospital and eight other hospitals. It was found that only 13 per cent of treatments needed to be given at a hospital, that 50 per cent of patients could have been treated at home and 31 per cent lived outside the district; 94 per cent of patients would have preferred treatment at a unit nearer their homes. The conclusion was that while two hospital departments were overloaded most of the others were not fully used; some would need to redeploy their staff and others would need a small increase in staff so that they could be used the whole day. This would be the first step to providing a wider distribution of out-patient physiotherapy. The alternative of providing facilities in health centres or clinics would have to be considered carefully.

OCCUPATIONAL THERAPY DEPARTMENT

See Abstract No. 607

DEPARTMENTS FOR SPECIAL THERAPY

See also Abstract Nos. 536, 537

584. POWELL, B. J. and VIAMONTES, J. **Factors affecting attendance at an alcoholic day hospital.** *British Journal of Addiction*, Edinburgh and London, 1974, Dec., vol. 69, no. 4, pp. 339-342.

The results are presented of a study of 127 cases at the Malcolm Bliss Memorial Health Center, St Louis, to assess demographic variables, symptoms, treatment and attendance. They indicate that those patients receiving any type of medication had more regular attendance than those who did not. It is thought that the patient is

motivated to attend because he feels the doctor is interested in him. It is suggested that medication should be a standard treatment for alcoholic patients. A further study has been instigated to assess the effectiveness of medication and placebo.

INTENSIVE CARE UNITS

585. DEWAR, H. A. **The problems of coronary ambulances.** *Journal of the Royal College of Physicians of London*, London, 1975, Jan., vol. 9, no. 2, pp. 173-181.

The provision of mobile coronary care services in the United Kingdom has lagged far behind the provision of in-patient coronary care units. Consultant physicians in the Newcastle Region were asked for their views on mobile services in an attempt to discover the reason for the disparity. They are not yet convinced that the beneficial effects, particularly in terms of reduced mortality, justify the extra expenditure of medical and nursing staff, time, effort and money. Most physicians favour the specially equipped ambulance staffed by doctors and nurses rather than the 'Brighton Model' in which ambulance men, specially trained and equipped, attend the case. The author discusses the general practitioner's role in the provision of mobile coronary care services.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See also Abstract Nos. 495, 561, 583

586. TUTUENKOV, N. G. and others. **General concepts for the creation of a national automated information system for policlinical services.** *Methods of Information in Medicine*, Stuttgart, 1975, Jan., vol. 14, no. 1, pp. 25-28.

A diagram illustrates the polyclinic system in Bulgaria which consists of: rural health settlements; rural, district, regional and national polyclinics; and dispensaries. The authors describe a national automated information system which covers all the polyclinic services rendered in the country (about 50 million). It was built on the basis of a regional system established in the town of Plovdiv in 1971. Input is based on one document for each patient examination which is easy to complete and contains all the necessary information. The cost of information processing by this system is about four times less than that in a manual system. It also enables analysis which can be useful for decision making in management.

CASUALTY AND ACCIDENT

587. SCHWARTZ, G. R. **The emergency department record.** *Journal of the American College of Emergency Physicians*, East Lancing, Mich., 1974, Nov./Dec., vol. 3, no. 6, pp. 385-387.

Fifty emergency department records from hospitals in the Philadelphia area were evaluated against 13 criteria developed within the Medical College of Pennsylvania and

Hospital. From the criteria, a model record was designed to meet physician's needs and those of administration within emergency medicine. The four pages of this are reproduced.

DAY HOSPITALS

See Abstract Nos. 584, 608

CHILDREN

See also Abstract No. 561

588. CONNORS, E. **Kennedy Memorial Hospital for Children: KMH grows as demands increase.** *Hospital Progress*, St. Louis, 1974, Nov., vol. 55, no. 11, pp. 72-75.

The Kennedy Memorial Hospital for Children, Brighton, Mass., specializes in the medical treatment and rehabilitation of children up to the age of 21 with multiple handicaps, including physical, neurological and learning disabilities. It opened in 1949, was extended in 1958 and 1961, and has now added another new two-storey wing. This houses 88 beds (relocated from existing buildings), playrooms, two isolation rooms, X-ray suite, orthopaedic examination rooms, an emergency area, and a spacious out-patient department. Of the hospitals 110 beds (in two- and four-bedded rooms) 44 are for medical and surgical patients and 66 for rehabilitation. In 1973 the out-patient department had 32,000 visits. About 100 children between the ages of three and 12 attend the hospital's day school.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 475, 513

589. MANHERZ, N. J. **Objectives of chronic care institutions.** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 29-32.

The objectives of the care of the chronic sick may be summarized as follows: the creation of a milieu which recognizes that each patient has a potential for growth; respect for each patient's independence; to help the patient to live a more purposeful life; to develop a team approach for assessing each patient's needs; to provide a suitable environment for long-stay care; to ensure that staff have the right personal qualities; and to improve the quality of treatment by the study of chronic illness, by helping with the training of health care staff and by promoting research into long-stay care.

590. DELL, S. **Nurses in nursing homes.** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 26, 28.

The nurse in a long-stay nursing home has extra responsibilities when an emergency arises as there is usually no resident medical staff. Although the elderly, and often senile, patients are not in need of acute hospital care they often require more con-

tinuous care and attention than acute patients. Nurses in nursing homes have to devote much time to social activities with the patients and to encouraging them to regain their independence.

591. THOMPSON, R. E. **How should we pay nursing homes?** *Hospital Administration in Canada*, Don Mills, Ont., 1974, Dec., vol. 16, no. 12, pp. 23-25.

Nursing homes in Canada are financed by government under the health insurance plan. At present there are two systems for determining grants: a flat rate, requiring all nursing homes to live within a fixed limit; and a budget system, paying costs on a dollar-for-dollar basis. The flat rate system is very inflexible but this could be mitigated by having several different rates. The patient pays a part of the cost and this might be varied according to the facilities provided and the ability of the patient to pay for extra amenities.

592. BARROWCLOUGH, F. **Complaints in geriatric hospitals.** *Nursing Times*, London, 1975, Jan. 16, vol. 71, no. 3, p. 118.

The public tend to over-react emotionally to shortcomings in services for the elderly, and geriatric hospitals get more than their fair share of complaints. The nursing and medical professions have been slow to appreciate the increasing specialization of geriatric medicine and in some geriatric hospitals senior staff are not properly trained for the job. It is important for complaints to be analysed rationally. Some complaints are never voiced to the hospital staff concerned but take the form of gossip. Others are verbal and are made either to the nurse in charge of the ward or there may be a request to see 'someone in authority'. Written complaints may be made to the hospital secretary or nursing administrator, to a member of parliament, the press or the Health Service Commissioner. Reasons for legitimate complaints include: lack of courtesy to patient or relations; poor supporting services or lack of them; poor communications between hospital and visitors; loss or deprivation of patient's personal possessions; neglect; and incorrect treatment or ill-treatment. A standard for care of the elderly would be the type of care the nurse herself would like to have. Visitors' handbooks are useful and a relative's association, participation by visitors in social activities and volunteer programmes also help towards an understanding of the problems of rehabilitation. Careful selection of new staff and adequate support for junior staff help to prevent incorrect treatment, neglect or ill-treatment. Complaints must never be left unresolved and apologies should be given where necessary. Malicious complaints, though rare, are best dealt with by a senior nurse or the hospital secretary.

593. MCHUGH, J. G. and CHUGHTAI, M. A. **The importance of team work in geriatric care.** *Nursing Times*, London, 1975, Jan. 23, vol. 71, no. 4, pp. 140-142.

The authors show how several professional skills are needed to solve the medical and social difficulties of the elderly. Two teams work in parallel. Team 1, the primary care team, works in the community and is based on several services, often in different locations. These are the general medical practioner, who should act as a co-ordinator, the home nursing service, health visiting and the social service. Team 2, the hospital-based team consists of nurse, consultant in geriatrics, physiotherapist, social worker and occupational therapist. Co-ordination is by the consultant in geriatrics, his secretary and his assistants. As with the primary care team other agencies can be

called in if necessary. This paper demonstrates the co-operative effort of team 2 and shows how the two teams may interact. Team 2 has the task of bringing patients back to the maximum level of health and capability for them to resettle in the community with the help and if necessary continuing support of Team 1. The special skills and functions of three crucial members of Team 2, the social worker, the consultant and the occupational therapist, are described and three case histories are given to illustrate the team work.

594. BARRON, E. **Hospital, hotel, agencies coordinate care for the aged.** *Hospitals*, Chicago, 1975, Jan. 1, vol. 49, no. 1, pp. 44-46.

In Far Rockaway, N.Y., a large number of senior citizens' hotels have been established for about 1,000 high-risk elderly persons. Although the residents are supposed to be served by private physicians, it became evident that the emergency and out-patient departments of Peninsular Hospital were being used as the major vehicles for medical treatment of the residents. This led to tension between the hospital and the hotels. The hospital's social work department attempted to resolve the problem by developing a liaison committee. A pilot project with one hotel showed that other health and welfare agencies were involved and these were invited to participate. Initially meetings were held monthly, but when it became apparent that problems could be managed by telephone, they became bimonthly. Some of the problems and their remedies are discussed. The liaison committee was able to reduce significantly inappropriate use of the hospital and to provide better medical care. Following the initial success of the scheme, it has been extended to another hotel with equally favourable results.

595. DANIEWICZ, C. **St. Mary's Extended Care Center, Minneapolis: outreach program minimizes premature institutionalization.** *Hospital Progress*, St. Louis, 1974, Dec., vol. 55, no. 12, pp. 26-28, 30.

At the St. Mary's Extended Care Center, Minneapolis, an Outreach Health Care Program has been established to help the elderly remain independent and capable of living longer in their own homes rather than in institutions. A variety of specialists in medical and social work provide advice, special equipment and social contact with the community. The program is financed partly by federal funds and partly by local ones.

596. COPELAND, J. R. M. and others. **Evaluation of a psychogeriatric service: the distinction between psychogeriatric and geriatric patients.** *British Journal of Psychiatry*, London, 1975, Jan., vol. 126, pp. 21-29.

The literature on the misplacement of elderly patients in hospital is briefly and critically reviewed. A survey was made of 160 patients entering geriatric and psychiatric hospitals in the Camberwell area. They were examined using semi-structured and standardized interviews. Reliability between members of the team for psychiatric ratings and diagnosis was established. Social measures, measures of mobility, and psychological tests were undertaken. All patients were followed up at intervals of one month, three months and one year after admission. Results showed that 64 per cent of the geriatric admissions suffered from a psychiatric illness, and that 5.3 per cent of patients entering the psychiatric hospital and 12 per cent entering the geriatric hospital were probably misplaced. No adverse effects on prognosis were demonstrated. The place of psycho-geriatric assessment units in relation to misplacement is discussed.

CARDIOLOGY

See Abstract No. 585

UROLOGY

See Abstract Nos. 537, 579

SURGERY

See also Abstract No. 579

597. RYAN, D. W. **A questionnaire survey of preoperative fears.** *British Journal of Clinical Practice*, Hove, 1975, Jan., vol. 29, no. 1, pp. 3-6.

A pre-operative questionnaire survey was conducted to evaluate the level of anxiety in 150 patients undergoing general surgery. Anxiety was present in 84 per cent of the patients. Cancer (30 per cent) and anaesthetic fears (25.3 per cent) were most common, while worries about the successful outcome of surgery (17.3 per cent) were less important. A small proportion of patients (3.3 per cent) who had signed operation consent forms admitted that they did not fully understand about their operation. The majority of patients felt that the pre-operative visit was a help and that the anaesthetist was interested in them and their illness. The sympathetic guidance and psychological support the anaesthetist can give during the pre-operative visit is stressed.

MATERNITY

See also Abstract Nos. 538, 547

598. OLDERSHAW, K. L. and BRUDENELL, J. M. **Use by general practitioners of obstetric beds in a consultant unit: a further report.** *British Medical Journal*, London, 1975, Jan. 18, vol. i, pp. 139-142.

Of 1,700 women booked for delivery by general practitioner obstetricians in a consultant unit at Dulwich Hospital, 1,399 had uncomplicated deliveries; the co-operation between practitioner and consultant was an obvious advantage for the 257 who were transferred completely to consultant care during pregnancy, labour or puerperium. The scheme, which started in 1964, has enabled general practitioners to continue to give complete obstetric care to their patients. The number of participating practitioners has, however, declined from 80 to 16 indicating that many preferred to concentrate on antenatal work.

PSYCHIATRY

See also Abstract Nos. 527, 539, 540, 584, 596

599. LEOPOLDT, H. **GP attachment and psychiatric domiciliary nursing.** *Nursing Mirror*, London, 1975, Feb. 13, vol. 140, no. 7, pp. 82-84.

The experimental scheme for the attachment of a psychiatric nurse from Littlemore Hospital, Oxford, to a group practice has been described previously [see *Hospital*

Abstracts, Vol. 13, Abstract 1501]. The scheme has since been expanded and three community psychiatric nurses are working on a part-time basis with four health centres; a fifth attachment is being negotiated. This paper: (i) gives a brief outline of the findings on which the present design of the scheme is based; (ii) summarizes the salient aspects of the psychiatric nurse's work and contribution in this setting; and (iii) examines possible future developments in the organization of community psychiatric nursing.

600. SHARPE, D. **Multidisciplinary management—a psychiatric nurse's view.** *Nursing Mirror*, London, 1975, Jan. 23, vol. 140, no. 4, pp. 73-74.

Following a recommendation of the Hospital Advisory Service, Warlingham Park Hospital, Surrey, set up a professional executive comprising hospital secretary, principal nursing officer, chairman of psychiatric division, principal psychologist, head occupational therapist and senior social worker. After three months its operation and functions were reviewed. Weekly meetings became fortnightly and slightly longer, and provision was made for deputies to ease attendance difficulties. Differing responsibilities towards the members represented led to some tensions. Day-to-day management rather than overall hospital policy and future planning had occupied the executive, so this emphasis was altered. A need for better communication between the executive and the staff led to the establishment of various groups for formal contact. The professional executive provides for communication between senior staff members not normally in contact and also gives them training in an on-going management situation.

601. TRINKL, F. H. **A stochastic analysis of programs for the mentally retarded.** *Operations Research*, Baltimore, 1974, Nov./Dec., vol. 22, no. 6, pp. 1175-1191.

This paper describes a modelling approach developed to evaluate alternative programmes for mentally handicapped adults in the State of Hawaii. The model can be characterized as a constrained value-weighted Markov chain. Five alternative programmes were considered: (i) the existing service system; (ii) accelerated community placements and expanded activity centre programmes; (iii) extended sheltered workshop programmes geared towards persons having marginal productivity; (iv) the features of (ii) and (iii) combined; and (v) single placement evaluation and purchase of service system geared to a sequential progression towards normalization. The results are presented in five tables and discussed. Alternative (v) represented the preferred choice, followed by (ii), (iv), (i) and (iii). A comparison of the respective value-cost ratios strengthened the preference for alternative (v).

602. LASKA, E. and others. **Data systems in mental health.** *Methods of Information in Medicine*, Stuttgart, 1975, Jan., vol. 14, no. 1, pp. 1-6.

The economic costs of mental illness are very great but the quality and efficacy of psychiatric care can be noticeably improved by the proper use of data information systems. The cost of such systems is high and it is useful for information about successful developments to be shared. The World Health Organization is in a good position to disseminate such information. Questions of safeguarding the confidentiality of records have arisen but automated record systems are safer than manual ones in this

respect. Some of the many systems at present in operation are briefly described, including those in the United States, Victoria Province of Australia, Indonesia, Israel, Russia, Belgium and France. Means by which the World Health Organization can help its member countries to establish psychiatric mental health information systems are set out. These include: (i) establishment of an information clearing house on data systems; (ii) formation of a group with the responsibility of disseminating information on data systems; (iii) a common pool of specialists to advise and help nations and to co-ordinate multinational efforts; and (iv) regional centralized computer facilities which would help to alleviate financial and manpower burdens.

603. HERTZMAN, M. and LEVIN, G. **The uses of a macro-systems modelling approach to mental hospitalisation.** *International Journal of Social Psychiatry*, London, 1974, vol. 20, nos. 3/4, pp. 225-230.

This paper is an attempt to render a systems analysis approach to psychiatric hospital care and institutional change. A macro-systems model is defined as one that is tuned to events that are substantial in size and that occur over an extended period, from weeks to years. The model is indicated schematically in two diagrams and explained. To demonstrate its principles, the model is applied to two in-patient services.

604. HERTZMAN, M. and LEVIN, G. **Empirical confirmation of a simulation model of mental hospitalisation.** *International Journal of Social Psychiatry*, London, 1974, vol. 20, nos. 3/4, pp. 218-224.

This paper describes a test in practice of a 'systems dynamics' simulation model [see Abstract 603] of general psychiatric and community mental health centre wards in a general hospital and a state psychiatric hospital. The wards were compared on emergency room visits, admissions, discharges and relative staff morale over a 70-day period. Using a new measure of responsiveness to patient needs, the authors demonstrate significant differences in admission patterns over time. Periodic declines in staff morale on the general psychiatric service result in patient discharges, whereas in the community mental health centre a more rational disposition scheme prevails. Some fundamental features of the systems model appear to be confirmed.

605. DOWKER, E. M. **A beauty salon in a psychiatric hospital.** *Nursing Mirror*, London, 1975, Jan. 23, vol. 140, no. 4, pp. 59-61.

Free beauty treatment is available as part of their rehabilitation to the 500 female psychiatric patients at High Royds Hospital, Menston, Yorkshire, and to over 200 geriatric patients at Grassington Hospital, which the beautician from High Royds visits. An average of 50 to 60 visits are made to the salon and one-third of the geriatric wards are visited each week. In the salon, which is fully equipped, attractively furnished and centrally situated, a relaxing atmosphere has been created. Treatment for geriatric patients is mainly removal of facial hair and for psychiatric patients, in addition, facials for various skin conditions of acne, dry skin (usually caused by neglect, the patient's illness or the medication given) and make-up demonstrations. Patients are often initially reticent to attend the salon but this is usually overcome after the first visit because of the obvious benefit and improved morale as a result of treatment. The

salon has a social function, being away from the wards and because patients usually attend four at a time.

606. MUMFORD, S. J. and others. **A token economy ward programme with chronic schizophrenic patients.** *British Journal of Psychiatry*, London, 1975, Jan., vol. 126, pp. 60-72.

This paper investigates the possibilities of behavioural modification in the ward management of chronic schizophrenic patients and describes the introduction of one such programme, the token economy. A group of 14 severely regressed institutionalized female patients with average length of stay in hospital of 30 years were included in the programme, where rewards were made contingent upon the display of more independent behaviour. The experiment was successful on the whole, and the authors suggest that behavioural therapy approaches introduced at ward level have considerable potential in the organization of rehabilitation programmes for long-stay patients in psychiatric hospitals, and would make better use of nursing skills than traditional methods of care.

607. PATTIE, A., WILLIAMS, A. and EMERY, D. **Helping the chronic psychiatric patient in an industrial therapy setting: an experiment in inter-disciplinary co-operation.** *British Journal of Psychiatry*, London, 1975, Jan., vol. 126, pp. 30-33.

A research project was initiated by nursing and psychological staff at Clifton Hospital, York, in an attempt to improve the level of functioning of chronic psychiatric patients in an industrial therapy unit. The findings for two experimental groups and a control group suggested that increased stimulation improved the patients' work ability, with the attention of a 'mother' figure contributing additionally to this benefit. The formal assessments devised by the staff showed that the patients' potential was neither appreciated nor attained, and it was felt that the short and simple tests constructed were of considerable value in helping staff to be aware of patients' capabilities and potential for improvement.

608. JANZEN, S. A. **Psychiatric day care in a rural area.** *American Journal of Nursing*, New York, 1974, Dec., vol. 74, no. 12, pp. 2216-2217.

This paper describes the establishment and work carried out on a day care programme initiated by staff of the Alger-Delta-Marquette Community Mental Health Centre, Marquette, Mich. A partial hospitalization programme was begun at the centre but the service could not be supported due to lack of finance and suitable patients. The day care programme using volunteers which had started in Alger and Delta counties was extended to include Marquette. Day care participants met from 09.00 to 15.00 on one day each week in a community church with suitable facilities, under the guidance of a volunteer. Later a former in-patient of the centre was recruited as a second volunteer. At first the participants frequently left the programme, but gradually a cohesive group formed and members gained greater confidence particularly in public situations. All participants have so far been adult women, and the aim is to support them whilst they are in the community. The programme does not aim to prevent admission to hospital. The group has now developed greater self-awareness, and carries out some social welfare projects, such as visiting elderly people. Two more volunteers have been recruited from programme participants and now run a second group, and there are now about 30 volunteers and participants in the programme.

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PUBLISHERS

Gersbach & Son, Barer Strasse 32, 8000 München 34, Western Germany.
Ministerium für Arbeit, Gesundheit und Soziales des Landes Nordrhein-Westfalen, Horionplatz 1, 4 Düsseldorf, Western Germany.
Spri, Box 1109 11181 Stockholm, Sweden.

Printed in England for Her Majesty's Stationery Office by Holmes & Sons (Printers) Ltd., Andover, Hampshire.

Dd. 506836 K11 5/75 7869

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